2024-2025 G & T-Grade 2-Science

Content Area: **Gifted and Talented**
Course(s):
Time Period: **Full Year**
Length: **9 Weeks**
Status: **Published**

Science - Biomes and Habitats

Unit Rationale

Biomes and habitats are essential parts of life on earth. Habitats are smaller areas of environments and ecosystems within the biomes. They are important because many unique forms of life inhabit each biome.

Biomes are in danger from climate change, deforestation, and pollution. We need to learn about these areas and the biodiversity of plants and animals that live within each biome so we can protect them.

21st Century Life and Career

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP1.1	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Essential Questions

Biomes
1) What is a biome?
2) What types of biomes are there and where are they located in the world?
3) Why is biodiversity important within biomes? What is the human impact on biomes?

Habitats
1) How do animals' habitats help them survive?
2) How do humans affect animal habitats?

Pre-Assessments

1) Teacher Recommendation

2) Earn an E in science on their 1st and 2nd trimester report card.

Instructional Plan

1- Introduction to Habitats & Biomes Unit

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT to define the words **habitat** and **biome**

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can explain what the words ***habitat*** and ***biome*** mean.

Instructional Strategies and Activities

1) Introduce rules and expectations for *Gifted and Talented* class.

2) Teach students how to play Breakout EDU.

3) Watch the YouTube video, *"What is a Habitat?"* (Linked here)

4) Watch the YouTube video, *"Introduction to Biomes"* (Linked here)

5) Watch the YouTube video, *Biome Facts for Kids* (Linked here)

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Class discussion questions and answers), about the habitats and biomes videos.

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

2 - Safe Internet Searches

Student Learning Intentions or We are learning to ... (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT to use Google Safe Search for Kids.

Student Success Criteria ...

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use Google Safe Search for Kids to explore a topic.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Show the YouTube video, *Search Tips for Kids* (Linked here)

4) Show the YouTube video, *Safe Google Search for Kids* (Linked here)

5) Use BrainPop to teach about safe searcher (Linked here) If this link doesn't work, just log onto BrainPop (not BrainPop, Jr), and do a search for *Internet Search.*

If you use BrainPop, use the challenge activity to check for understanding.

6) Introduce Biome Map project assigned through Google Classroom. Here is a pdf of the handout. (Linked here)

Students will use safe search techniques to find the location of each biome on the map.

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Class discussion questions and answers, about how to use safe search techniques while looking for information about the location of biomes.

3) Students will complete a map of biome locations. We will review the answers, and the maps will be sent home.

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

BrainPop (Linked here)

Biome Map handout (linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

3 - Tundra

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT explain the characteristics of the world biomes.

4) WALT describe the plants and animals that live in each biome.

5) WALT describe the effect of the actions of humans on the world's biomes.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use Google Safe Search for Kids to explore a topic.

I can describe the characteristics of the tundra.

I can understand the adaptations of plants and animals who live in the tundra.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Introduce the Interactive Biome Notebook (Linked here). Glue in the cover page and Tundra pages (pg. 7, 9-11, 13-15). Full-color sample pages can be projected for students to see.

4) Watch the BrainPop video about the Tundra. (Linked here)

5) Students read about the Tundra in their Interactive Biome Notebook handout.

6) Students complete the Tundra section of their InterActive Biome Notebook.

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Go over the answer key for the Tundra pages in the interactive notebook.

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

BrainPop (Linked here)

Student Interactive Biome Notebook (Linked here)

BrainPop video about the Tundra. (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

4 - Grassland/Savanna & Biome In a Bag Experiment

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT explain the characteristics of the world biomes.

4) WALT describe the plants and animals that live in each biome.

5) WALT describe the effect of the actions of humans on the world's biomes.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use Google Safe Search for Kids to explore a topic.

I can describe the characteristics of the grassland/savanna biome.

I can understand the adaptations of plants and animals who live in the grassland/savanna biome.

I can understand the impact of human activities on the grassland/savanna biome.

I can construct a model of the grassland/savanna biome.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Research the Grassland/Savanna biome using the Interactive Biome Notebook (Linked here). The Grassland/Savanna biome is on pages (pg. 21-23).

4) Watch the BrainPop video about the Grassland/Savanna biome. (Linked here)

5) Students will make a model of a biome. See the experiment (Linked here).

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Go over the answer key for the Grassland/Savanna pages in the interactive notebook.

3) Students will successfully create their *Biome in a Bag* and begin their observation sheet (Linked here).

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

BrainPop (Linked here)

Student Interactive Biome Notebook (Linked here)

BrainPop video about the Tundra. (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

5 - Desert and Deciduous Forest

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT explain the characteristics of the world biomes.

4) WALT describe the plants and animals that live in each biome.

5) WALT describe the effect of the actions of humans on the world's biomes.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use Google Safe Search for Kids to explore a topic.

I can describe the characteristics of the Desert Biome and the Deciduous Forest Biome.

I can understand the adaptations of plants and animals who live in the Desert Biome and the Deciduous Forest Biome.

I can understand the impact of human activities on the Desert Biome and the Deciduous Forest Biome.

I can construct a model of the grassland/savanna biome.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

Students may work together to do the research for the 2 biomes

3) Research the Desert Biome using the Interactive Biome Notebook (Linked here). The Desert Biome is on pages (pg. 25-27).

4) Watch the BrainPop video about the Desert Biome. (Linked here)

5) Research the Deciduous Forest Biome using the Interactive Biome Notebook (Linked here). The Desert Biome is on pages (pg. 29-31).

6) Watch the BrainPop video about the Deciduous Forest Biome. (Linked here)

7) Students will record observations of their *Biome in a Bag* (Linked here).

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Go over the answer key for the Grassland/Savanna pages in the interactive notebook.

3) Students will successfully create their *Biome in a Bag* and begin their observation sheet (Linked here).

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

BrainPop video about the Desert Biome (Linked here)

YouTube video about the Deciduous Forest Biome (Linked here)

Student Interactive Biome Notebook (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

6 - Tropical Rainforest and Aquatic (saltwater)

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT explain the characteristics of the world biomes.

4) WALT describe the plants and animals that live in each biome.

5) WALT describe the effect of the actions of humans on the world's biomes.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use Google Safe Search for Kids to explore a topic.

I can describe the characteristics of the Tropical Rainforest Biome and the the Aquatic (saltwater) Biome.

I can understand the adaptations of plants and animals who live in the Tropical Rainforest Biome and the the Aquatic (saltwater) Biome.

I can understand the impact of human activities on the Tropical Rainforest Biome and the the Aquatic (saltwater) Biome.

I can make observations and record data.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

Students may work together to do the research for the 2 biomes

3) Research the Desert Biome using the Interactive Biome Notebook (Linked here). The Tropical Rainforest Biome is on pages (pg. 17-20).

4) Watch the BrainPop video about the Tropical Rainforest Biome. (Linked here)

5) Research the Aquatic (saltwater) Biome using the Interactive Biome Notebook (Linked here). The Aquatic (saltwater) Biome is on pages (pg. 33-35).

6) Watch the video, *Ocean Habitats and Ecosystems* about the Aquatic (saltwater) Biome. (Linked here)

7) Students will record observations of their *Biome in a Bag* (Linked here).

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Go over the answer key for the Grassland/Savanna pages in the interactive notebook.

3) Students will successfully create their *Biome in a Bag* and begin their observation sheet (Linked here).

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

BrainPop video about the Tropical Rainforest Biome (Linked here)

YouTube video about the Aquatic (saltwater) Biome (Linked here)

Student Interactive Biome Notebook (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

7 - Individual Poster of Biome

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT explain the characteristics of the world biomes.

4) WALT describe the plants and animals that live in each biome.

5) WALT describe the effect of the actions of humans on the world's biomes.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use Google Safe Search for Kids to explore a topic.

I can describe the characteristics of a biome.

I can understand the adaptations of plants and animals who live in a specific biome.

I can understand the impact of human activities on a particular biome.

I can make observations and record data.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Students will use their Interactive Biome Notebook to complete an poster about one biome that they choose. Blank posters linked here.

4) The students may choose a biome we have already studies, or they may choose one of the following biomes:

- Taiga Biome, BrainPop video (Linked here)
- Freshwater Biomes, YouTube Video (Link here)
- Chaparral Biome also known as the Shrub Biome, YouTube video by Geodiode (Linked here)
- Alpine Tundra Biome, YouTube video(Linked here)

5) Students may also search the Internet using safe search strategies to learn about biomes.

7) Students will record observations of their *Biome in a Bag* (Linked here).

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Go over the answer key for the Grassland/Savanna pages in the interactive notebook.

3) Students will complete a biome poster of their choice

3) Students will successfully create their *Biome in a Bag* and begin their observation sheet (Linked here).

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (linked here)

Blank Biome Posters(Linked here)

Science Untamed Website about biomes (Linked here)

BrainPop video about the Tropical Rainforest Biome (Linked here)

YouTube video about the Aquatic (saltwater) Biome (Linked here)

Taiga Biome, BrainPop video (Linked here)

Freshwater Biomes, YouTube Video (Link here)

Chaparral Biome also known as the Shrub Biome, YouTube video by Geodiode (Linked here)

Alpine Tundra Biome, YouTube video(Linked here)

Student Interactive Biome Notebook (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

8 - Triorama - Part I

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT create a triorama to present information.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can create a triorama to display facts about biomes

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Each student will make a triorama depicting a biome. We will glue 4 trioramas together to make our paper sculpture.

3) Students will learn how to create a triorama. Watch this video for (Linked here).

4) Our paper sculpture will have 4 sides (one side for each biome), but the procedure for a triorama will work here.

5) Students will record their final observations of their *Biome in a Bag* (Linked here).

The *Biome in a Bag* should be sent home today.

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Questions and answers about creating the triorama.

3) Each student will complete a triorama about a biome different from their poster biome.

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Triorama video (Linked here)

Student Interactive Biome Notebook (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

9 - Triorama - Part II

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT create a triorama to present information.

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can create a triorama to display facts about biomes

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Students will complete their trioramas.

Four trioramas will be glued together to make a 3D informational sculpture.

If there is an odd number of triorams we will still glue them together to make a 3D informational sculpture.

4) Student's trioramas will be displayed along with their posters for the school to see and learn from.

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Students will be able to answer questions about ther triramas.

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Breakout EDU (Linked here)

Triorama video (Linked here)

Student Interactive Biome Notebook (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

10 - Review Game and Additional Resources

Student Learning Intentions or We are learning to … (WALT)

1) WALT stretch our thinking to help us solve complex problems creatively.

2) WALT use Google Safe Search for Kids.

3) WALT play ***Battle of the Biomes***

Student Success Criteria …

For Warm-up Activities including Breakout EDU:

I can stretch my thinking to help me problem-solve.

I can understand the rules and expectations for Gifted & Talented class

For Main Part of Lesson

I can use my knowledge about world biomes to play a board game called ***Battle of the Biomes***.

Instructional Strategies and Activities

1) Review rules and expectations for *Gifted and Talented* class **as needed**.

2) Warm-Up Breakout EDU puzzle of the day or Science-themed puzzle.

3) Students will play the board game, ***Battle of the Biomes***.

To play this board game students must be able to recall facts about biomes.

They may use their *Biomes Interactive Notebook* to help them in the game.

4) There are other challenges and activities on the Gifted & Talented Drive (Linked here).

Formative Assessments

For Warm-up Activities including Breakout EDU:

1) Students solve a variable number of spelling, language arts and logic puzzles. Each correct solution unlocks a lock. When students have unlocked all of the locks they get a message congratulating them on a successful

breakout.

For the main part of the lesson:

1) Class discussion. Students will reflect on how each of the class expectations will help them be successful in *Gifted & Talented* class.

2) Students will be able to answer questions about their trioramas.

Instructional Materials and Resources

Gifted & Talented Website (Linked here)

"Rules & Expectations" Slide to present and displayed in Google Classroom (Linked here)

Battle of the Biomes board game

If you need to make a new game or need additional game pieces click here. You will also need the link for the game cards. (Linked here)

Student Interactive Biome Notebook (Linked here)

Gifted & Talented Drive (Linked here)

Reflections and Suggested Modifications

There is really only about 50 minutes per class. It takes time to pick up the students from their classrooms. They always need some time to organize what they are bringing with them to G&T class.

It also takes some time for them to pack up at the end of class and return to their classroom.

Breakout EDU has s different puzzle every day, as well as longer breakout challenges. Students will work on the "Lock of the Day." The complexity differs for each challenge, therefore the time it takes the students to "break out" differs for each challenge.

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, GIfted, At-risk of Failure)

English Language Learners

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students.

Special Education Students

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily

overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media Literacy

Biomes are threatened by climate change. As we learn about the world's biomes and how the actions of people impact them, we can make better informed decisions to help protect the biodiversity within.

Defenders of Wildlife Website https://defenders.org/issues/protecting-habitat

Celebrating 5 black leaders in animal advocacy https://www.worldanimalprotection.us/latest/blogs/5-black-animal-activists-who-inspire-us/

Green Global Travel - Top 15 female wildlife conservationists & animal rights activists https://greenglobaltravel.com/wildlife-conservationists-animal-rights-activists/

Climate change and habitats https://www.nwf.org/Educational-Resources/Wildlife-Guide/Threats-to-Wildlife/Climate-Change/Habitats

New Jersey Student Learning Standards: Content Area

	With guidance, plan and conduct an investigation in collaboration with peers.
SCI.K-ESS2	Earth Systems
SCI.K-ESS2-2	Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
SCI.K.ESS3.C	Human Impacts on Earth Systems
SCI.K-ESS3	Earth and Human Activity
SCI.K-ESS3-1	Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
SCI.K-ESS3-3	Communicate solutions that will reduce the impact of climate change and humans on the land, water, air, and/or other living things in the local environment.
GIFT.PK-12.1	Learning and Development
GIFT.PK-12.1.2	Self-Understanding. Students with gifts and talents possess a developmentally appropriate understanding of how they learn and grow; they recognize the influences of their beliefs, traditions, and values on their learning and behavior.
GIFT.PK-12.1.3	Self-Understanding. Students with gifts and talents demonstrate understanding of and respect for similarities and differences between themselves and their peer group and others in the general population.
GIFT.PK-12.1.4	Awareness of Needs. Students with gifts and talents access resources from the community to support cognitive and affective needs, including social interactions with others having similar interests and abilities or experiences, including same-age peers and mentors or experts.
GIFT.PK-12.1.5	Awareness of Needs. Students' families and communities understand similarities and differences with respect to the development and characteristics of advanced and typical learners and support students with gifts and talents' needs.
GIFT.PK-12.1.6	Cognitive and Affective Growth. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs.
GIFT.PK-12.1.7	Cognitive and Affective Growth. Students with gifts and talents recognize their preferred

	approaches to learning and expand their repertoire.
GIFT.PK-12.2.5	Evaluation of Programming. Students identified with gifts and talents demonstrate important learning progress as a result of programming and services.
GIFT.PK-12.3.3	Talent Development. Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.
GIFT.PK-12.3.5	Culturally Relevant Curriculum. Students with gifts and talents develop knowledge and skills for living and being productive in a multicultural, diverse, and global society.
GIFT.PK-12.4.1	Personal Competence. Students with gifts and talents demonstrate growth in personal competence and dispositions for exceptional academic and creative productivity. These include self-awareness, self-advocacy, self-efficacy, confidence, motivation, resilience, independence, curiosity, and risk taking.
GIFT.PK-12.4.2	Social Competence. Students with gifts and talents develop social competence manifested in positive peer relationships and social interactions.
GIFT.PK-12.4.4	Cultural Competence. Students with gifts and talents value their own and others' language, heritage, and circumstance. They possess skills in communicating, teaming, and collaborating with diverse individuals and across diverse groups.1 They use positive strategies to address social issues, including discrimination and stereotyping.
GIFT.PK-12.4.5	Communication Competence. Students with gifts and talents develop competence in interpersonal and technical communication skills. They demonstrate advanced oral and written skills, balanced biliteracy or multiliteracy, and creative expression. They display fluency with technologies that support effective communication.

Integration of Career Readiness, Life Literacies and Key Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP11	Use technology to enhance productivity.

Integration of Computer Science and Design Thinking

	Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images).
	Individuals use computing devices to perform a variety of tasks accurately and quickly. Computing devices interpret and follow the instructions they are given literally.

Interdisciplinary Connections: NJSLS for ELA, Social Studies, Science and/or Math

ELA.L	Language
ELA.L.RF	Foundational Skills: Reading Language
SOC.K-12.2	Gathering and Evaluating Sources

SOC.K-12.3	Seeking Diverse Perspectives
ELA.L.WF	Foundational Skills: Writing Language
	All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.
ELA.R	Reading
SCI.K-ESS2	Earth Systems
ELA.W	Writing
	Plants and animals can change their environment.
SCI.K.ESS3.C	Human Impacts on Earth Systems
SCI.K-ESS3-1	Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
ELA.SL	Speaking and Listening
	Events have causes that generate observable patterns.
SCI.K-ESS3-3	Communicate solutions that will reduce the impact of climate change and humans on the land, water, air, and/or other living things in the local environment.