

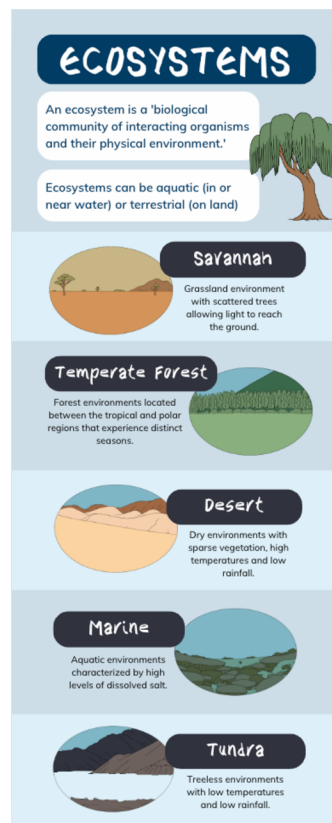
BIODIVERSITY CULMINATING TASK BUNDLE

- The bundle includes 3 culminating tasks (unit projects)
- Each is fully editable and includes a complete rubric
- Comes in Office, PDF, and Google Formats

Diorama



Infographic



Presentation



BIODIVERSITY CULMINATING TASK BUNDLE



1. Ecosystem Diorama Project

2. Invasive Species Impact Infographic Project

3. Indigenous Agriculture Presentation Project

Ecosystem Diorama Project

Project Description:
In this project, you will create a small diorama of a local ecosystem to showcase its biodiversity and the interrelationships between species. You will also write an explanation of how this biodiversity supports the ecosystem's resilience.

Materials List:

- Shoebox or similarly sized cardboard box.
- Construction paper or colored paper.
- Markers, paint, colored pencils, or crayons.
- Scissors
- Glue or tape
- Small twigs, pebbles, leaves (optional).
- Clay or playdough (optional).
- Small figurines or toys representing animals (optional).
- Writing paper and pencil for the written explanation.

Step-by-Step Instructions: Watch this instruction video first on how to make a diorama - <https://teachwithafrog.com/how-to-make-a-diorama/>

1. Choose Your Ecosystem:
 - Select a local ecosystem (e.g., forest, pond, meadow, beach).
 - Research the plants and animals that live there.
 - Make a list of at least 10 different species to include.
2. Plan Your Diorama:
 - Sketch a rough plan of your diorama.
 - Decide where to place different elements.
 - Think about how to show relationships between species.
3. Create the Background:
 - Use the box as your diorama base.
 - Cut and glue colored paper to create the background.
 - Add landscape features (hills, trees, rocks) using paper, clay, or playdough.
4. Add Plants and Animals:
 - Create plants and animals using paper, clay, or playdough.
 - Place them in appropriate locations within the ecosystem.
 - Make sure to include a variety of species to show biodiversity.
5. Show Interrelationships:
 - Use strings, arrows, or placement to show how species interact.
 - Examples: predator-prey relationships, pollination, symbiosis.
6. Add Labels:
 - Create small labels for each species in your ecosystem.
 - Include the species name and its role in the ecosystem.
7. Write Your Explanation:
On a separate piece of paper, write a short explanation of:
 - Description of your chosen ecosystem.
 - List of species included and their roles.
 - How the species interact with each other.
 - How biodiversity makes this ecosystem resilient.
 - What might happen if biodiversity was reduced.
8. Prepare to Present:
Be ready to present your diorama to the class, explaining:
 - Your ecosystem and the species you included.
 - Examples of biodiversity and interrelationships.
 - How biodiversity supports ecosystem resilience.



Invasive Species Impact Infographic Project

Project Description:
In this project, you will research an invasive species in your local area and create an infographic to explain how it reduces local biodiversity. An infographic is a visual representation of information that uses images, charts, and minimal text to explain a topic clearly and quickly. Your infographic can either be physical on a poster board or digital using a digital program like Canva.com.

Click here to see an example digital infographic - <https://tinyurl.com/y7zmhsjd>

Materials List:

- Computer with internet access (for research and creation).
- Large poster paper or cardboard (at least 22" x 28") – optional.
- Markers, paint, colored pencils, or crayons – optional.
- Ruler
- Scissors
- Glue stick
- Images of the invasive species and affected native species.

Step-by-Step Instructions:

1. Choose Your Invasive Species:
 - Research invasive species in your local area.
 - Pick one that interests you and has a significant impact on local biodiversity.
 - Make sure there's enough information available about its effects.
2. Research:
Gather information about:
 - The invasive species (appearance, origin, how it arrived).
 - At least 3 native species it affects.
 - How it reduces biodiversity (e.g., outcompeting natives, altering habitats).
 - Its impact on the local ecosystem.
 - Any control or eradication efforts.
3. Plan Your Infographic:

Indigenous Agriculture Presentation Project

Project Description:
In this project, you will create a digital presentation using PowerPoint, Prezi, Google Slides, or a similar platform. Your presentation will focus on an Indigenous agricultural practice, explaining how it utilizes and supports biodiversity. You'll research a specific practice, create informative slides, and present your findings to the class.

Materials List:

- Computer with internet access.
- PowerPoint, Prezi, Google Slides, or similar presentation software.
- Notebook and pen for taking notes during research.

Step-by-Step Instructions:

- Choose Your Presentation Software:
 - Decide whether you'll use PowerPoint, Prezi, Google Slides, or another approved platform.
 - Familiarize yourself with the basics of your chosen software.
- Select an Indigenous Agricultural Practice:
 - Research different Indigenous agricultural practices from around the world. Examples include:
 - Agroforestry
 - Crop Rotation
 - Companion Planting
 - Water Harvesting
 - Chinampas
 - Aboriginal Australian fire-stick farming
 - Choose one that clearly demonstrates connections to biodiversity.
- Research Your Chosen Practice:
Gather information about:
 - Which Indigenous groups use this practice.
 - What the practice involves.
 - What plants and/or animals are part of this system.
 - How it supports biodiversity.
 - How it differs from conventional farming methods.
- Plan Your Presentation:
Create an outline covering these key points:
 - a. Title slide (Practice name and your name).
 - b. Introduction to the Indigenous group.
 - c. Description of the agricultural practice.
 - d. Plants and animals involved.
 - e. How it supports biodiversity.
 - f. Benefits for the environment and community.
 - g. Conclusion and references.
- Create Your Slides:
 - Aim for 8-10 slides total.
 - Use clear, concise text (bullet points work well).
 - Include relevant images on each slide.
 - Use a consistent, easy-to-read font and color scheme.

BIODIVERSITY CULMINATING TASK BUNDLE



Ecosystem Diorama Project

Project Description:

In this project, you will create a small diorama of a local ecosystem to showcase its biodiversity and the interrelationships between species.

Ecosystem Diorama Project

Project Description:
In this project, you will create a small diorama of a local ecosystem to showcase its biodiversity and the interrelationships between species. You will also write an explanation of how this biodiversity supports the ecosystem's resilience.

Materials List:

- Shoebox or similarly sized cardboard box.
- Construction paper or colored paper.
- Markers, paint, colored pencils, or crayons.
- Scissors
- Glue or tape
- Small twigs, pebbles, leaves (optional).
- Clay or playdough (optional).
- Small figurines or toys representing animals (optional).
- Writing paper and pencil for the written explanation.

Step-by-Step Instructions: Watch this instruction video first on how to make a diorama - <https://teachwithaferry.com/how-to-make-a-diorama/>

1. Choose Your Ecosystem:
 - Select a local ecosystem (e.g., forest, pond, meadow, beach).
 - Research the plants and animals that live there.
 - Make a list of at least 10 different species to include.
2. Plan Your Diorama:
 - Sketch a rough plan of your diorama.
 - Decide where to place different elements.
 - Think about how to show relationships between species.
3. Create the Background:
 - Use the box as your diorama base.
 - Cut and glue colored paper to create the background (sky, water, etc.).
 - Add landscape features (hills, trees, rocks) using paper or clay.
4. Add Plants and Animals:
 - Create plants and animals using paper, clay, or small figurines.
 - Place them in appropriate locations within the diorama.
 - Make sure to include a variety of species to show biodiversity.
5. Show Interrelationships:
 - Use strings, arrows, or placement to show how species interact.
 - Examples: predator-prey relationships, pollination, symbiosis.
6. Add Labels:
 - Create small labels for each species in your diorama.
 - Include the species name and its role in the ecosystem.
7. Write Your Explanation:
On a separate piece of paper, write a short explanation (about 1 page) that includes:
 - Description of your chosen ecosystem.
 - List of species included and their roles.
 - How the species interact with each other.
 - How biodiversity makes this ecosystem resilient.
 - What might happen if biodiversity was reduced.
8. Prepare to Present:
Be ready to present your diorama to the class, explaining:
 - Your ecosystem and the species you included.
 - Examples of biodiversity and interrelationships.
 - How biodiversity supports ecosystem resilience.



Marking Rubric:

Biodiversity Representation (5 points)

5: Includes 10+ diverse species appropriate to the ecosystem.

4: Includes 8-9 diverse species mostly appropriate to the ecosystem.

3: Includes 6-7 species with some diversity.

2: Includes fewer than 6 species or lacks diversity.

1: Minimal representation of biodiversity.

Ecosystem Accuracy (5 points)

5: Diorama accurately represents the chosen ecosystem.

4: Diorama mostly represents the chosen ecosystem with minor inaccuracies.

3: Diorama somewhat represents the chosen ecosystem with some inaccuracies.

2: Diorama poorly represents the chosen ecosystem.

1: Diorama does not represent the chosen ecosystem.

Interrelationships (5 points)

5: Clearly shows multiple interrelationships between species.

4: Shows some interrelationships between species.

3: Shows few interrelationships between species.

2: Attempts to show interrelationships but unclear.

1: Does not show interrelationships between species.

Written Explanation (5 points)

5: Thoroughly explains biodiversity, interactions, and ecosystem resilience.

4: Adequately explains biodiversity, interactions, and ecosystem resilience.

3: Partially explains biodiversity, interactions, and ecosystem resilience.

2: Minimally explains biodiversity, interactions, and ecosystem resilience.

1: Explanation is unclear or missing key elements.

Creativity and Effort (5 points)

5: Exceptional creativity and effort in design and construction.

4: Good creativity and effort in design and construction.

3: Some creativity and effort in design and construction.

2: Limited creativity and effort in design and construction.

1: Minimal creativity and effort in design and construction.

Total Score: ____ / 25

Tips for Success:

- Focus on accuracy in representing your ecosystem.
- Be creative in showing biodiversity and relationships.
- Take your time to create neat, clear labels.
- Practice your presentation before sharing with the class.



BIODIVERSITY CULMINATING TASK BUNDLE



Invasive Species Impact Infographic Project

Project Description:

In this project, you will research an invasive species in your local area and create an infographic to explain how it reduces local biodiversity.

Invasive Species Impact Infographic Project

Project Description:
In this project, you will research an invasive species in your local area and create an infographic to explain how it reduces local biodiversity. An infographic is a visual representation of information that uses images, charts, and minimal text to explain a topic clearly and quickly. Your infographic can either be physical on a poster board or digital using a digital program like Canva.com.

Click here to see an example digital infographic - <http://tinyurl.com/y7xmhsjd>

Materials List:

- Computer with internet access (for research and creation).
- Large poster paper or cardboard (at least 22" x 28") – optional.
- Markers, paint, colored pencils, or crayons – optional.
- Ruler
- Scissors
- Glue stick
- Images of the invasive species and affected native species.

Step-by-Step Instructions:

1. Choose Your Invasive Species:
 - Research invasive species in your local area.
 - Pick one that interests you and has a significant impact on local biodiversity.
 - Make sure there's enough information available about its effects.
2. Research:
Gather information about:
 - The invasive species (appearance, origin, how it arrived).
 - At least 3 native species it affects.
 - How it reduces biodiversity (e.g., outcompeting natives, altering habitats).
 - Its impact on the local ecosystem.
 - Any control or eradication efforts.
3. Plan Your Infographic:
Sketch a rough layout including:
 - Title and subtitle.
 - Section for invasive species information.
 - Section for affected native species.

5. Key Elements to Include:

- a. Name and image of the invasive species.
- b. Where it came from and how it arrived.
- c. At least 3 native species it affects (with images).
- d. How it reduces biodiversity (with visual representation).
- e. Its impact on the local ecosystem.
- f. Any control or eradication efforts.

6. Make it Visually Appealing:

- Use a clear, easy-to-follow layout.
- Choose a color scheme (3-4 colors) and use it consistently.
- Use different font sizes to show the importance of information.
- Balance text and visuals.

7. Review and Refine:

- Check your spelling and facts.
- Make sure all required elements are included.
- Ask a family member or friend if the infographic is clear and appealing.

8. Prepare to Present:
Be ready to explain your infographic to the class.

- Why you chose this invasive species.
- Its main impacts on local biodiversity.
- The most interesting fact you learned.

Marking Rubric:
Content (10 points)
10-9: All required elements included with accurate, detailed information.
8-7: Most elements included with mostly accurate information.
6-5: Some elements missing or inaccurate information.
4-3: Many elements missing or significant inaccuracies.
2-1: Minimal required content or mostly inaccurate.

Visual Presentation (5 points)
5: Excellent use of visuals, very clear and engaging layout.
4: Good use of visuals, clear layout.
3: Adequate use of visuals, somewhat clear layout.
2: Limited use of visuals, confusing layout.
1: Poor use of visuals, very difficult to follow.

Biodiversity Impact Explanation (5 points)
5: Clearly explains how the species reduces biodiversity with specific examples.
4: Explains biodiversity reduction with some specific examples.
3: Partially explains biodiversity reduction with limited examples.
2: Attempts to explain biodiversity reduction but unclear or inaccurate.
1: Does not explain biodiversity reduction.

Creativity and Effort (5 points)
5: Exceptional creativity and effort in design and content.
4: Good creativity and effort in design and content.
3: Some creativity and effort in design and content.
2: Limited creativity and effort in design and content.
1: Minimal creativity and effort in design and content.

Total Score: ____ / 25

Tips for Success:

- Use reliable sources for your research (ask your teacher for help if needed).
- Keep text brief and to the point.
- Use eye-catching visuals to draw attention to important information.
- Practice explaining your infographic before presenting to the class.

BIODIVERSITY CULMINATING TASK BUNDLE



Indigenous Agriculture Presentation Project

Project Description:

In this project, you will create a digital presentation using PowerPoint, Prezi, Google Slides, or a similar platform.

Indigenous Agriculture Presentation Project

Project Description:

In this project, you will create a digital presentation using PowerPoint, Prezi, Google Slides, or a similar platform. Your presentation will focus on an Indigenous agricultural practice, explaining how it utilizes and supports biodiversity. You'll research a specific practice, create informative slides, and present your findings to the class.

Materials List:

- Computer with internet access.
- PowerPoint, Prezi, Google Slides, or similar presentation software.
- Notebook and pen for taking notes during research.

Step-by-Step Instructions:

- Choose Your Presentation Software:
 - Decide whether you'll use PowerPoint, Prezi, Google Slides, or another approved platform.
 - Familiarize yourself with the basics of your chosen software.
- Select an Indigenous Agricultural Practice:
 - Research different Indigenous agricultural practices from around the world. Examples include:
 - Agroforestry
 - Crop Rotation
 - Companion Planting
 - Water Harvesting
 - Chinampas
 - Aboriginal Australian fire-stick farming
 - Choose one that clearly demonstrates connections to biodiversity.
- Research Your Chosen Practice:
 - Gather information about:
 - Which Indigenous groups use this practice.
 - What the practice involves.
 - What plants and/or animals are part of this system.
 - How it supports biodiversity.
 - How it differs from conventional farming methods.
- Plan Your Presentation:
 - Create an outline covering these key points:
 - a. Title slide (Practice name and your name).
 - b. Introduction to the Indigenous group.
 - c. Description of the agricultural practice.

Marking Rubric:

Content (10 points)

- 10-9: Comprehensive, accurate information about the practice and its relationship to biodiversity.
- 8-7: Good information about the practice with clear links to biodiversity.
- 6-5: Basic information about the practice with some links to biodiversity.
- 4-3: Limited information or weak links to biodiversity.
- 2-1: Minimal or inaccurate information.

Visual Design (5 points)

- 5: Excellent slide design, engaging visuals that enhance understanding.
- 4: Good slide design, relevant visuals that support the content.
- 3: Adequate slide design, some relevant visuals.
- 2: Poor slide design, limited or irrelevant visuals.
- 1: Confusing layout, no relevant visuals.

Understanding of Biodiversity (5 points)

- 5: Clearly explains how the practice supports and utilizes biodiversity.
- 4: Good explanation of the practice's relationship to biodiversity.
- 3: Some explanation of how the practice relates to biodiversity.
- 2: Limited or unclear explanation of biodiversity connections.
- 1: No explanation of how the practice relates to biodiversity.

Presentation Skills (5 points)

- 5: Excellent delivery, clear speech, good use of slides, within time limit.
- 4: Good delivery, mostly clear speech, uses slides effectively, close to time limit.
- 3: Adequate delivery, sometimes unclear, some effective use of slides.
- 2: Unclear delivery, limited use of slides, significantly over/under time.
- 1: Very difficult to understand, ineffective use of slides, far from time limit.

Total Score: ____ / 25

Tips for Success:

- Use reliable sources for your research (ask your teacher for help if needed).
- Keep text on slides brief – use it as a guide for what you'll say.
- Use high-quality, relevant images to make your presentation visually appealing.
- Practice your presentation multiple times to build confidence.
- Speak slowly and clearly and show enthusiasm during your presentation for what you've learned about Indigenous agricultural practices and biodiversity.

Add Visual Elements:

- Include at least one diagram or flowchart showing how the practice supports biodiversity.
- Use high-quality images to illustrate the practice and the Indigenous group.
- Consider adding simple animations to make your presentation more engaging.

Review and Refine:

- Check your spelling and facts.
- Ensure all images are properly credited.
- Practice your timing (aim for a 3–5-minute presentation).

Prepare to Present:

- Write speaker notes for each slide if needed.
- Practice presenting with your slides.
- Be ready to answer questions about your chosen practice.