

Critical Thinking Skills

Antarctica

| Skills For Critical Thinking | | Reading Comprehension | | | | |
|------------------------------|--|-----------------------|-------|----------------------------------|----------|---------|
| | | Location | Place | Human & Environment Interactions | Movement | Regions |
| LEVEL 1 Knowledge | <ul style="list-style-type: none"> • Match • Show or Label • List Information • Recall Details (5Ws + H) • Find Information | ✓ | ✓ | ✓ | | |
| | | ✓ | ✓ | ✓ | ✓ | ✓ |
| LEVEL 2 Comprehension | <ul style="list-style-type: none"> • Describe & Compare • Summarize • Explain • Select | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | ✓ | ✓ | ✓ | ✓ | ✓ |
| LEVEL 3 Application | <ul style="list-style-type: none"> • Organize Information • Apply | ✓ | ✓ | ✓ | ✓ | ✓ |
| | | ✓ | ✓ | ✓ | ✓ | ✓ |
| LEVEL 4 Analysis | <ul style="list-style-type: none"> • Conclude • Analyze | ✓ | | ✓ | ✓ | ✓ |
| | | ✓ | | ✓ | ✓ | ✓ |
| LEVEL 5 Synthesis | <ul style="list-style-type: none"> • Design • Create | | | ✓ | | |
| | | | | ✓ | | |
| LEVEL 6 Evaluation | <ul style="list-style-type: none"> • Evaluate • Compare | | | ✓ | ✓ | ✓ |
| | | | | | | |

Based on Bloom's Taxonomy



Human & Environmental Interactions

1. People interact with their environment each day. Sometimes we do things that leave the environment unchanged. Sometimes we do things that harm the environment. Sometimes we do things that renew the environment. Sometimes we do things that protect the environment. Read each example below, and decide how it affects the environment. Color in the box that shows your answer.

| | unchanged | harmful | renews | protects |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| a) recycling | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) littering | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) planting trees | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) hiking in the woods | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) using clean gasoline | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f) creating wildlife sanctuaries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g) pouring chemicals down the drain | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h) killing endangered animals | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

2. What do you know about **global warming**? It is something that has been in the news for many years. What have you discussed in school? Sit with two friends, and brainstorm what you know about global warming (i.e., what causes it, what are the affects of global warming, etc.).



Human & Environmental Interactions

Many things we do each day affect our **environment**. Learning these things means learning about human and environmental **interactions**. Some of these interactions are good, but others are not. We recycle paper to save trees, but we pollute the air that the trees clean for us. We work to protect endangered animals, but some people continue to hunt and kill them. When an environment is harsh or changing, we must **adapt** to that environment to survive.



One interaction that is affecting Antarctica is climate change. Scientists call this change **global warming**. It is also called the **greenhouse effect**. Some scientists say that it is caused by the Earth's natural cycles. Many other scientists say we are causing this change by polluting the air. The cars we drive pollute our air. The factories that produce the products we need also create this pollution. Many scientists believe this air pollution is causing the temperature of our planet to rise slowly. This change has already affected Antarctica. Much of the **pack ice** that surrounds it, and some of the ice sheets that cover it, are slowly disappearing. They are melting, and the water is flowing into the oceans.



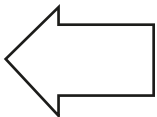
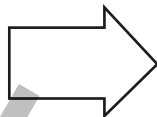
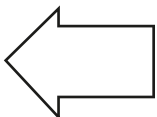
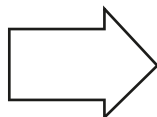
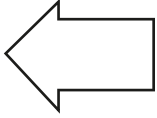
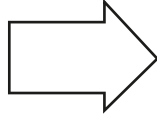
How is global warming affecting Antarctica?

Another effect of pollution is found in the **atmosphere** high above Antarctica. Pollution is harming the **ozone layer** that surrounds the Earth! The ozone layer helps protect humans, animals, and plants from the sun's harmful rays. Unfortunately, scientists have discovered a large hole in the ozone layer over Antarctica. There is now a greater chance of getting a sunburn or skin cancer. Doctors tell people to use sunscreen and to stay out of the sun to avoid its harmful rays. Many countries are taking steps to reduce the pollution that causes ozone layer damage. They are forbidding the use of damaging chemicals, such as those in **aerosol sprays** and air conditioners that use **Freon** gas.



Human & Environmental Interactions

1. Which word matches the definition? Color the arrow that points to the correct word. You may use either the reading or a dictionary to help find your answers.

| | | | | |
|-------------|--|---|--|----------------|
| pack ice |  | A Large areas of frozen water packed together and covering a body of water. |  | atmosphere |
| greenhouse |  | B A part of the Earth's atmosphere that helps block many of the sun's harmful rays. |  | ozone layer |
| interaction |  | C A gradual increase in the Earth's average temperature caused by human activity, natural cycles, or both. |  | global warming |

2. Put a check mark (✓) next to the answer that is most correct.

a) Climate change is also known as _____.

- A the ozone layer
- B global warming
- C the atmosphere
- D human interactions

b) Pollution from some aerosol cans is hurting _____.

- A doctors
- B pack ice
- C the ozone layer
- D scientists

Antarctica Landscape in the Summer

