



# Modeling the Carbon Cycle

For this activity, you will use a model to illustrate the role of photosynthesis and cellular respiration in the movement of carbon through the biosphere, atmosphere, hydrosphere, and geosphere. This worksheet will help you plan, develop, and execute your model.

## Develop Your Model

1. In your own words, describe what process or question your model will illustrate.

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2. What type of model will you use? What materials will you need to develop your model?

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3. Use the space below to sketch a prototype of your model. If you need more space, you can use a separate page.

4. Complete your model. Below, explain how it works and describe how it addresses the process or question.

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## Modeling the Carbon Cycle *CONTINUED*

### Use Your Model

Answer the questions below using your model.

1. How are the processes of photosynthesis and cellular respiration related to the carbon cycle?

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2. Use your model to predict one way carbon absorbed by photosynthetic algae might end up sequestered in the geosphere.

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### Apply Your Knowledge

1. Scientists often discuss carbon “sinks” and carbon “sources.” In what ways are primary producers carbon sinks? In what way are they sources?

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