Germinating Seeds

What You Need

- bean seeds
- plastic knife
- hand lens
- paper towels
- water
- tape
- black marker

Find Out
Do this activity to see what seeds need to germinate.

Process Skills
Observing
Predicting
Communicating

Time
- 35 minutes to get started
- 5–10 minutes every day for two weeks
What To Do

1. Soak your bean seeds.
2. Split the seeds apart.
3. **Observe** the inside of the seeds with the hand lens. Find a half that has an embryo. Find a half that has a food supply.
4. Place several halves with the embryo and the food supply on a wet paper towel. Label them A.

5. Place several halves with the food supply, but without the embryo, on another wet paper towel. Label them B.

6. Place the paper towels in a sunny place.

7. Based on what you have learned about seeds, **predict** which seeds will germinate.

8. **Observe** your seeds every day.

9. **Record** your observations on the chart.
Circle *YES* if the seeds germinated.
Circle *NO* if the seeds did not germinate.

<table>
<thead>
<tr>
<th>Seeds A</th>
<th>Seeds B</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>YES</em></td>
<td><em>YES</em></td>
</tr>
<tr>
<td><em>NO</em></td>
<td><em>NO</em></td>
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Conclusions

1. Which seeds germinated?

2. Why did some seeds germinate and other seeds not germinate?

New Questions

1. Would all of the seeds germinate if they were placed in soil instead of on a paper towel?

2. Write a new question you have about how plants grow.
Investigating Leaves

Draw a picture of how the leaf looked on Day One and Day Two.

Day One  

Day Two
Activity Journal
Lesson 1 • Plant Parts

Name ____________________________

What Happened

1. How did your leaf change?

________________________________________________________________________

________________________________________________________________________

2. Why do you think that your leaf changed?

________________________________________________________________________

________________________________________________________________________

What If

Predict what would happen if you did this activity with a flower.

________________________________________________________________________
Observing Bean Seeds

Draw what you see inside the seed.

Draw a picture that shows how a seed germinates.
What Happened

1. What did the inside of the seed look like?

2. What do you think was in the seed around the embryo?

What If

Predict what would happen if you planted half of a seed.
Activity Journal
Lesson 3 • Plant Differences

Name ______________________

ACTIVITY

Observing Leaves

Draw what you see through the hand lens.

<table>
<thead>
<tr>
<th>How long?</th>
<th>How wide?</th>
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Write how long the leaves are.
Write how wide they are.

<table>
<thead>
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<th>How long?</th>
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Activity Journal
Lesson 3 • Plant Differences

Name ______________________________

What Happened

1. What were the differences in size of the leaves you collected?

________________________________________________________________________

________________________________________________________________________

2. How many different shapes of leaves did you find?

________________________________________________________________________

________________________________________________________________________

What If

What other plant parts could you measure and compare?

________________________________________________________________________

________________________________________________________________________