Scientific Method & Measurement   Name:

Hypothesis Practice   Period:

A hypothesis is a prediction that can be tested.

> "I predict that I could breathe on Mars" is not a hypothesis, because it cannot be tested. People have not traveled to Mars yet.

> "I predict that I could walk through that wall" is a hypothesis, because it can be tested. It just would hurt a lot. So don't do it.

A hypothesis answers a question that popped into your mind when you made an observation.

> Hmmm. My cat just saw a bird through the window. He crouched down, and started moving towards the bird really slowly. I wonder why he does that? Hey -- maybe moving slowly makes it less likely that the bird will see him, and he could get close enough to grab it.

A hypothesis is set up a certain way. It uses an "if...then...because" structure, to show cause and effect.

> If my cat is stalking a bird by crouching down and moving slowly, then it will be a successful hunter because the bird will not notice it getting closer.

You also want to make sure that your hypothesis contains proper spelling, grammar, and punctuation.

Analyze the hypotheses (plural of hypothesis) below. Check off the boxes that are true.

> OBSERVATION: I notice that the part of my fish tank that gets more sunlight seems to have more algae on the glass. Why does this happen?

> HYPOTHESIS I: If I clean the algae off of the fish tank, then more algae will grow back on the sunny side.
> - ☐ it is a prediction
> - ☐ it is based upon observations
> - ☐ it is in an "if...then..because" format
> - ☐ it has proper spelling, grammar, and punctuation

Is this a good hypothesis? Explain why or why not.

HYPOTHESIS 2: If I scrape the algae off of the fish tank, then it will not grow back because I killed all of it.
- ☐ it is a prediction
- ☐ it is based upon observations
- ☐ it is in an "if...then..because" format
- ☐ it has proper spelling, grammar, and punctuation

Is this a good hypothesis? Explain why or why not.

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HYPOTHESIS 3: I hate aljii becuz it is stoopid.

- [ ] it is a prediction
- [ ] it is based upon observations
- [ ] it is in an "if...then..because" format
- [ ] it has proper spelling, grammar, and punctuation

Is this a good hypothesis? Explain why or why not.

HYPOTHESIS 4: If I clean the algae off of the fish tank, then more algae will grow back on the sunny side because sunlight helps algae to grow.

- [ ] it is a prediction
- [ ] it is based upon observations
- [ ] it is in an "if...then..because" format
- [ ] it has proper spelling, grammar, and punctuation

Is this a good hypothesis? Explain why or why not.

Now design an experiment. How could you test the best hypothesis? Explain what you would do below.
Hint: what could you do to block sunlight from getting to part of the tank?