

Does the Description Assess the Inquiry Construct?

CHALLENGE WORKSHEET

1 GRADE 4: OBSERVING/QUESTIONING

Stacy watched the teacher demonstrate the use of a thermometer to measure the temperature of a liquid (PS 1.1.1e). She was accurate in observing (100% accuracy) but needed verbal prompt to remain on-task (0% independence).

List problems with this description:

2 GRADE 4: CONDUCTING

Filipe used a three step process to conduct his experiment. He was 100% accurate but needed verbal prompts for two steps (0% independence).

List problems with this description:

3 GRADE 8: PLANNING

Candice developed a research question "*Will it rain and be cold in October?*" (ESS 2.1.1) Each day during October she was given her data chart, a thermometer, and a pencil to record her data. She was 100% accurate but needed verbal prompts to record the data (0% independence)

List problems with this description:

4 GRADE 8: CONDUCTING

Henry investigated the physical properties of matter (rocks) by evaluating their texture (smooth, rough) (ESS 1.1.2b). Henry developed a hypothesis, "All rocks are smooth." Henry tested 10 rocks, recorded his data, and circled smooth rocks. Henry was accurate in recording rock data 9/10 times (90% accurate) with 100% independence.

List problems with this description:

5 GRADE 11: CONDUCTING

Amie investigated the patterns of human health and disease (LS 4.2.1a). Amie developed a research question, "*What makes a person sick/injured?*" She reviewed a research packet of 10 photos and recorded her observations (signs of health/disease). Amie was accurate in identifying the signs in 6/9 photos (90% accurate) with 100% independence.

List problems with this description:

6 GRADE 11: ANALYZING

Hans's class investigated temperatures within the same environment (ESS1.2.5d). The class identified five locations within their classroom to measure the temperature, and developed the hypothesis, "*Temperatures are the same within our classroom.*" Hans visited the five locations, read the temperature (digital display) and recorded his data. Hans completed final two questions of his lab report by: (1) indicating whether his hypothesis was correct and (2) circling the data on his chart that he used to decide this. Hans was 100% accurate in indicating whether his hypothesis was correct but incorrectly circled his supporting data (50% accurate). Hans required verbal prompts to complete both questions (0% independence).

List problems with this description:

Connection to Structured Performance Task

Identify the inquiry construct(s) described in the following:

Description	✓if described
<p>1. Stacy observed the teacher demonstrate the use of a thermometer to measure the temperature of water as it changed states (PS 1.1.1e). The demonstration was conducted to help prepare Stacy to make a prediction for her investigation. Stacy described her observations in scientific terms (using states of matter and temperature). She used her observations to create a hypothesis: <i>"All frozen solids will change to a liquid at 40 degrees."</i> She was accurate in observing and describing her observations (100% accuracy) but needed verbal prompt to describe her observations using scientific terms (0% independence).</p>	<input type="checkbox"/> Observe/Question <input type="checkbox"/> Plan <input type="checkbox"/> Conduct <input type="checkbox"/> Analyze
What information should be added?	
<p>2. In conducting his investigation, Filipe used a three step process to identify the external features common to familiar animals (LS 1.1.2) 1- get materials/tools; 2-use tools to observe the animals; 3-record data). He was 66% accurate (steps 1 & 2) but needed verbal prompts to complete each step (0% independence).</p>	<input type="checkbox"/> Observe/Question <input type="checkbox"/> Plan <input type="checkbox"/> Conduct <input type="checkbox"/> Analyze
What information should be added?	
<p>3. Candice developed a research question <i>"Will it rain and be cold in October?"</i> (ESS 2.1.1) Candice took data each day during October. Each morning she completed a planning sheet that assessed her ability to (1) identify the tools she would need/use (thermometer, rain gauge) and (2) the information she will collect (temperature, presence of rain). Candice was 100% accurate and 100% independent in identifying tools and information to answer her research question.</p>	<input type="checkbox"/> Observe/Question <input type="checkbox"/> Plan <input type="checkbox"/> Conduct <input type="checkbox"/> Analyze
What information should be added?	
<p>4. Henry investigated the physical properties of matter (rocks) by evaluating their texture (smooth, rough) (ESS 1.1.2b). Henry developed a hypothesis, <i>"All rocks are smooth."</i> Henry tested 10 rocks and recorded his data. After all data was recorded, Henry circled the rough rocks and summarized results by indicating if <i>"All rocks are smooth"</i>, <i>"All rocks are rough"</i>, or <i>"Some rocks are rough and some are smooth."</i> Henry was accurate in summarizing his results (100% accurate) with 100% independence.</p>	<input type="checkbox"/> Observe/Question <input type="checkbox"/> Plan <input type="checkbox"/> Conduct <input type="checkbox"/> Analyze
What information should be added?	
<p>5. Amie investigated the patterns of human health and disease (LS 4.2.1a). Amie developed a research question, <i>"What makes a person sick/injured?"</i> She reviewed a research packet of 10 photos, orally described what she observed and recorded her observations (signs of health/disease). Amie was assessed on her skills to represent her data correctly on her recording form (location, correct description to match her oral description). Amie was accurate in representing her data in 6/10 photos (60% accurate) and required point prompt for 8/10 (20% independence).</p>	<input type="checkbox"/> Observe/Question <input type="checkbox"/> Plan <input type="checkbox"/> Conduct <input type="checkbox"/> Analyze
What information should be added?	
<p>6. Hans's class investigated temperatures within the same environment (ESS1.2.5d). The class identified five locations within their classroom to measure the temperature, and developed the hypothesis, <i>"Temperatures are the same within our classroom."</i> Hans visited the five locations, read the temperature (digital display), and recorded his data. Hans completed final two questions of his lab report by: (1) indicating whether his hypothesis was correct and (2) circling the data on his chart that he used to decide this. Hans was 100% accurate in indicating whether his hypothesis was correct but incorrectly circled his supporting data (50% accurate). Hans required verbal prompts to complete both questions (0% independence).</p>	<input type="checkbox"/> Observe/Question <input type="checkbox"/> Plan <input type="checkbox"/> Conduct <input type="checkbox"/> Analyze
What information should be added?	