Draw a Generic Insect: Segmented Body and Six-Leg Construction

Original tasks 1, 2, 3 / complete keys

Task 1

A student draws an insect with head 2 cm, thorax 3 cm, abdomen 5 cm, and six legs. Four legs attach to the thorax and two attach to the abdomen. State whether the construction meets the lesson rules and explain why.

Answer: No. Two legs attach to the abdomen, so the rule that all six legs attach to the thorax is broken.

Reason: The lesson requires exactly six legs and all six attached to the thorax. Four on the thorax plus two on the abdomen fails the attachment rule even though the total is six.

Check: Count legs at each body part. Confirm thorax count equals six and head and abdomen counts equal zero.

Task 2

On a 15 cm wide sheet, a student plans head 1.5 cm, thorax 2.5 cm, and abdomen 4 cm. They mark three attachment dots on each side of the thorax. The left dots span 2 cm and the right dots span 3 cm. Is the layout consistent with the planned thorax length? Explain.

Answer: No. The right-side dots span 3 cm, which is longer than the planned 2.5 cm thorax, so at least one dot falls outside the thorax.

Reason: Attachment dots must lie within the thorax span. A 3 cm span exceeds the 2.5 cm thorax length, so the layout is inconsistent.

Check: Measure each side's dot span and compare it with the thorax length. Both spans must be less than or equal to the thorax length.

Task 3

A drawing shows three labeled segments and six legs, but the legs are drawn as single straight lines with no joints. The lesson convention defines a leg as one or more line segments with joints where segments meet. Does the drawing satisfy the leg construction convention? Explain.

Answer: Yes, if each leg is a single line segment. The convention allows one or more segments, so a single straight line per leg is valid as long as all six legs attach to the thorax.

Reason: The convention does not require multiple segments. A single segment is a valid leg construction under the stated rule.

Check: Check that each leg is a line segment starting at a thorax dot and that there are exactly six legs.

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Original tasks 4 / complete keys

Task 4

A student draws an insect with head 2 cm, thorax 3 cm, abdomen 6 cm, and six legs on the thorax. They label only the thorax and number the legs one to six. Does the drawing meet the labeling rubric? Explain.

Answer: No. The rubric requires head, thorax, and abdomen to be labeled. Labeling only the thorax leaves two required labels missing.

Reason: The rubric lists three body segment labels as a requirement. Missing head and abdomen labels fails that item even if leg numbering is correct.

Check: List the required labels and tick each one present. Confirm head, thorax, and abdomen are all labeled.

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Source rubric / reflection

- [ ] Three body segments are drawn and labeled: head, thorax, abdomen.
- [ ] Exactly six legs are drawn.
- [ ] All six legs attach to the thorax, not the head or abdomen.
- [ ] Leg attachment points are visible or numbered.
- [ ] Body segments are visually distinct through shape or seam lines.
- [ ] Labels are clear and label lines do not cross confusingly.
- [ ] Valid alternative styles are accepted if the three structural rules are met.

Reflection: What did you check, what did you change, and what will you try next?