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| **Interpreting and Expressing Volume** |
| Explores volume as the amount of space occupied by a 3-D shape.A black and white diagram of a cube  Description automatically generated“This cube occupies a space that can be measured. Each edge has a length of 1 cm and it has a volume of 1 cm3.”  | Recognizes volume of 3-D shapes in familiar contexts.“Everyday objects have volume; for example, a loaf of bread and a cereal box.” | Models volume using concrete materials (non-standard units).A box with a lid  Description automatically generated “The volume of the box is about 12 marbles. Marbles aren’t the greatest unit because they leave gaps.” | Expresses volume of 3-D shapes using standard units (cubic metres, cubic centimetres).A box with a lid  Description automatically generated“I filled the box with centimetre cubes. The volume of the box is about 24 cm3.” |
| **Observations/Documentation** |
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| **Interpreting and Expressing Volume (cont’d)** |
| Models volume of a rectangular prism as a 3-D array of cubic units.A pair of cubes with squares  Description automatically generated “The prism is a 3-D array of centimetre cubes. There are 12 cubes in each layer and 3 layers: 12 + 12 + 12 = 36.The prism has volume 36 cm3.” | Recognizes that volume remains the same when decomposed or rearranged.A pair of cubes with squares  Description automatically generatedA grey square with black squares  Description automatically generated with medium confidence“I rearranged the 36 centimetre cubes to make a different prism. The number of cubes didn’t change so, the volume is still 36 cm3.” | Determines the volume of a rectangular prism using multiplication.A pair of cubes with squares  Description automatically generated “The prism has length 4 cm, width 3 cm and height 3 cm. The area of the base is 4 cm × 3 cm = 12 cm2, and the volume of the prism is: Area of the base × height = 12 cm2 × 3 cm = 36 cm3.” | Flexibly solves problems in various contexts that involve the volume of rectangular prisms.A square prism has height 11 cm and volume 539 cm3. Determine the side length of the square base.“Volume = area of base × height 539 cm3 = Area of the base × 11 cm539 ÷ 11 = 49So, the area of the base is 49 cm2.The base is a square, so all sides are equal: 49 cm2 = *s* × *s*Since 7 × 7 = 49, the side length of the square base is 7 cm.” |
| **Observations/Documentation** |
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