

CAVEMAN SAM SLATE



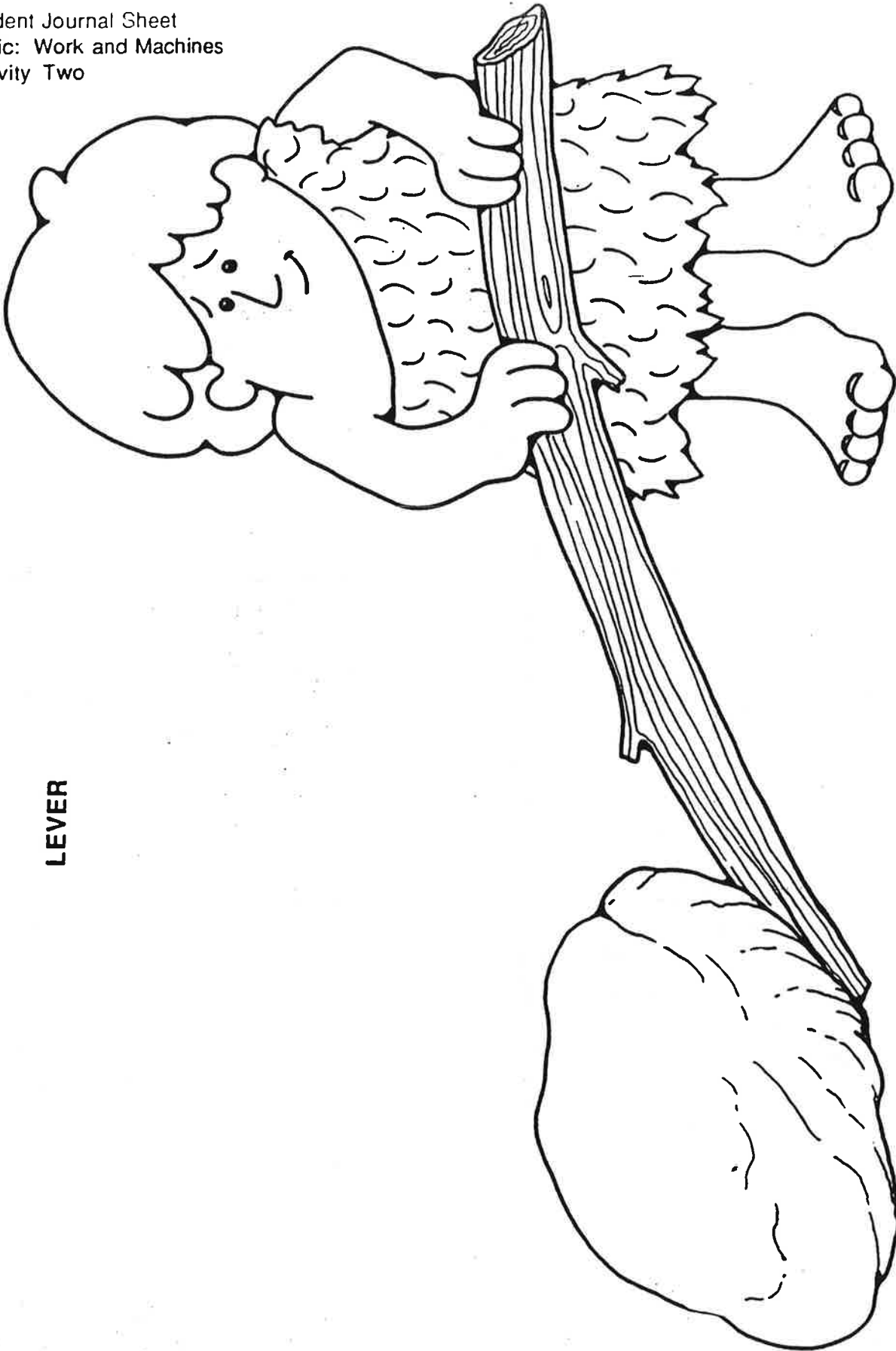
NAME

Student Journal Sheet
Topic: Work and Machines
Activity One

CAVEMAN SAM AT REST

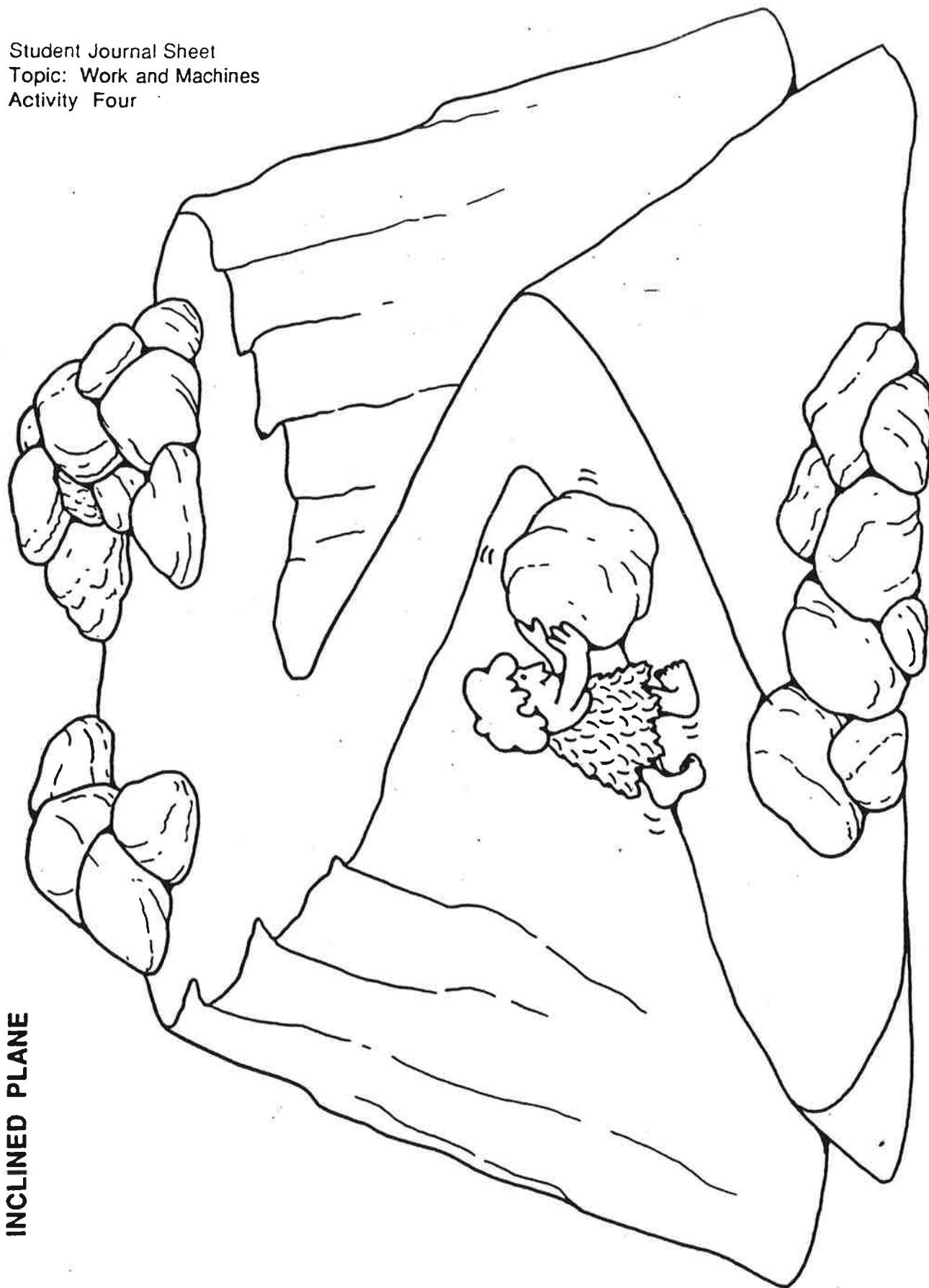


Student Journal Sheet
Topic: Work and Machines
Activity Two



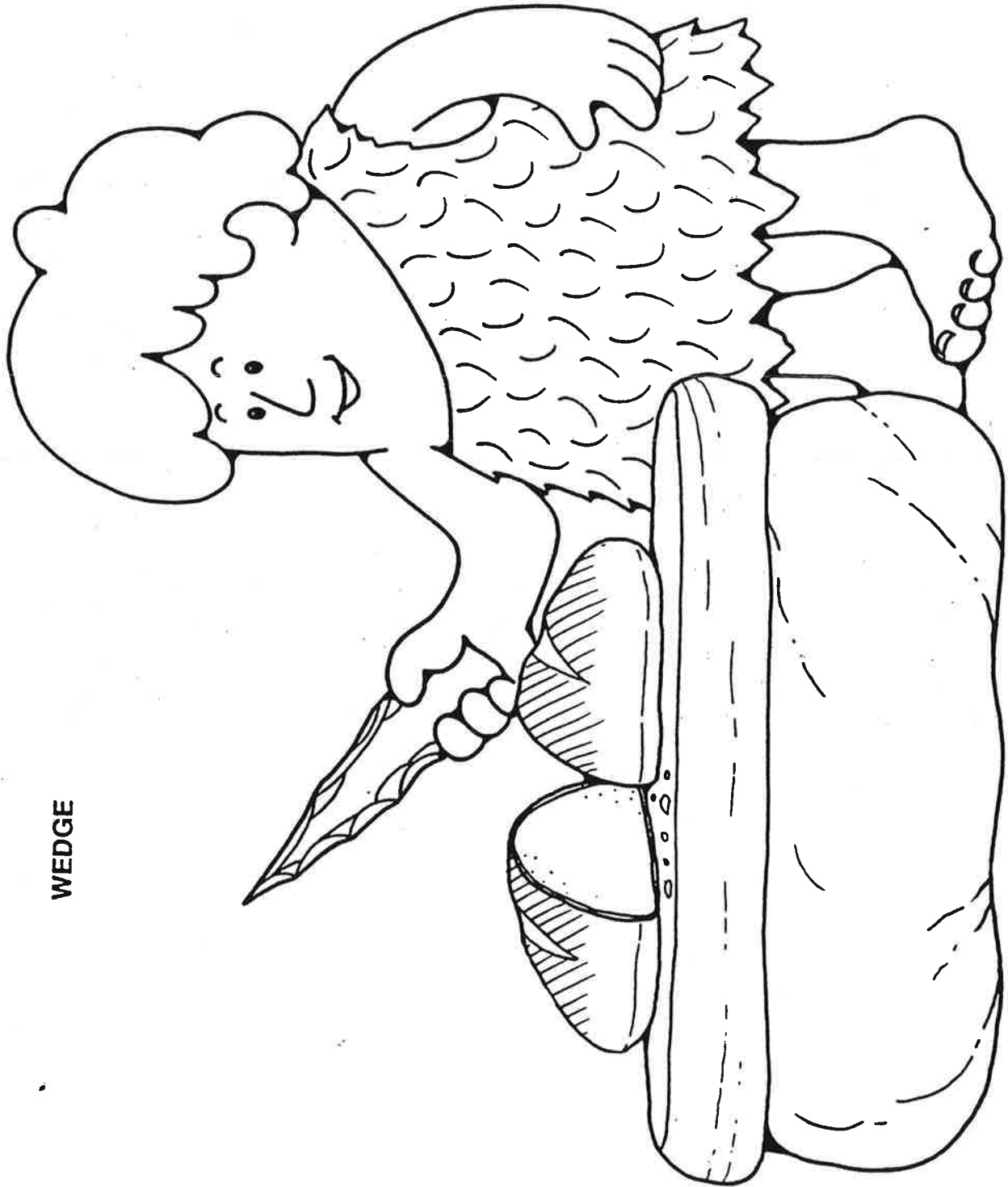
LEVER

Student Journal Sheet
Topic: Work and Machines
Activity Four



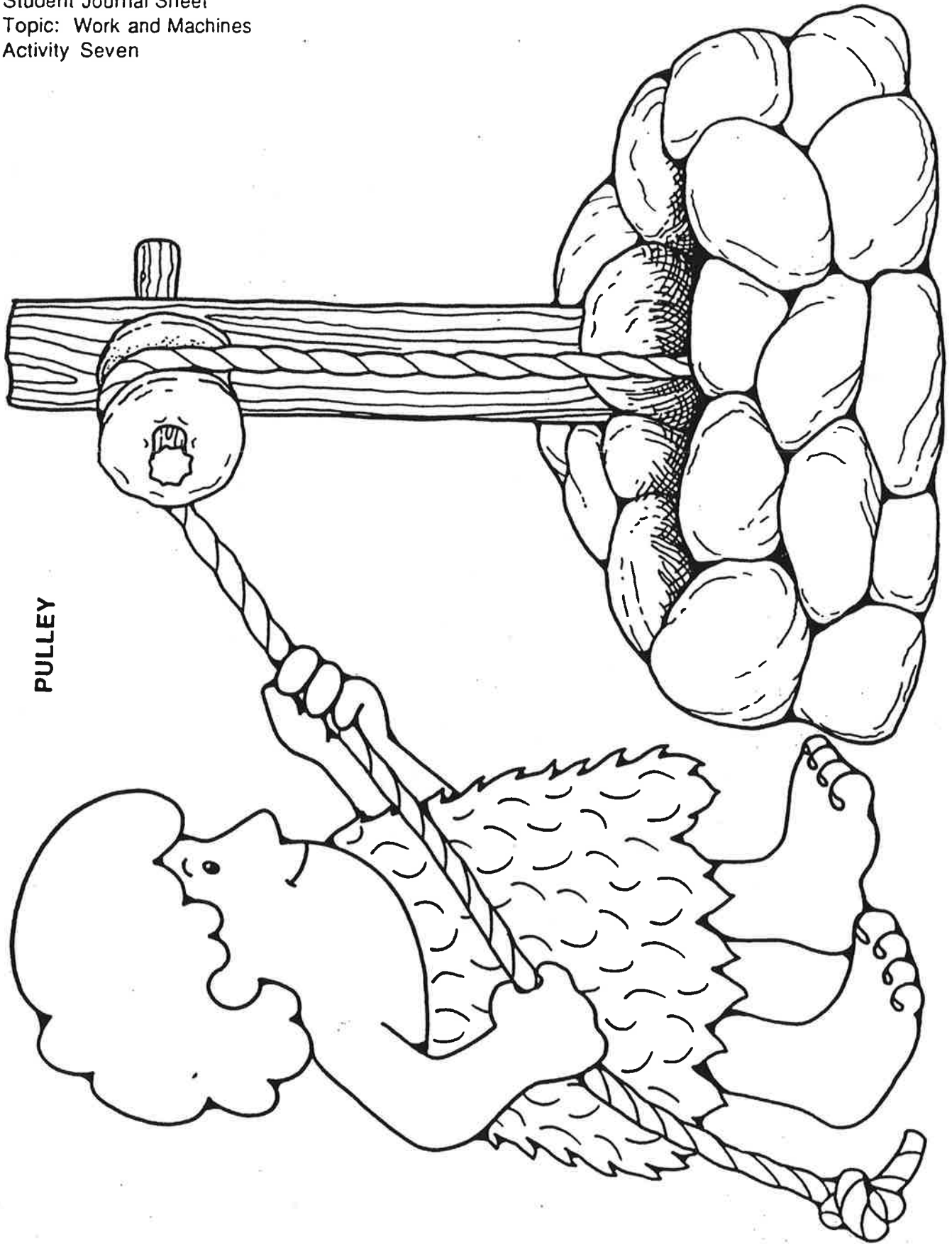
INCLINED PLANE

Student Journal Sheet
Topic: Work and Machines
Activity Six



WEDGE

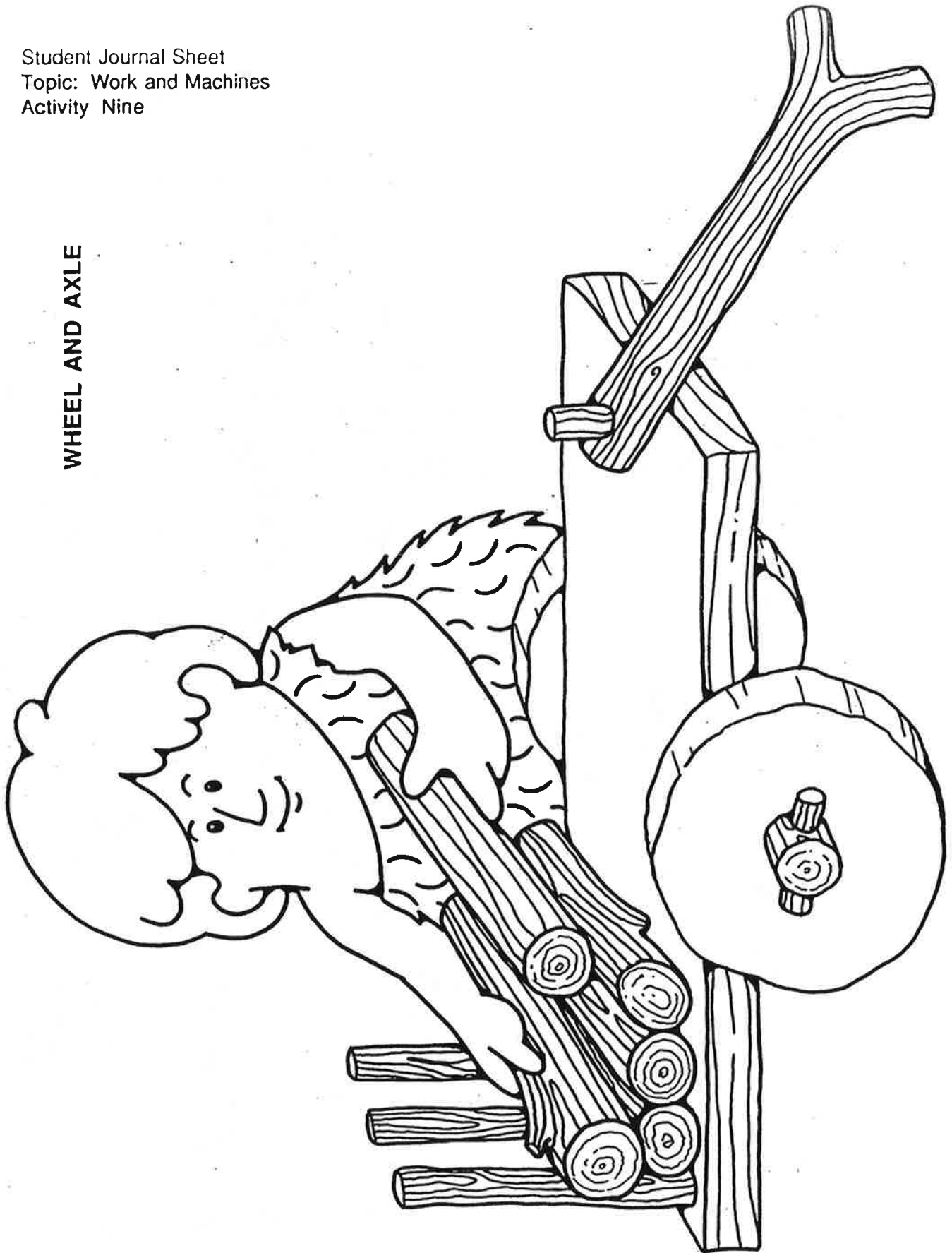
Student Journal Sheet
Topic: Work and Machines
Activity Seven



PULLEY

Student Journal Sheet
Topic: Work and Machines
Activity Nine

WHEEL AND AXLE



THE STORY OF SAM SLATE

DAY 1

Sam Slate was a young caveman who had grown up enough so that his parents told him "Sam, it's time you went out in the big world and made it on your own". So Sam set off to find himself his own place.

He looked everywhere for just the right place. There had to be food nearby and protection from animals and water should also be close and easy to reach. He finally found the right kind of place.

Teacher draws a picture of the location on the board.

It was just down from the edge of a cliff on a ledge in a canyon. Wild animals couldn't reach him here and there were fruits and other foods growing close by and best of all there was a little river at the bottom of the canyon. Then Sam decided to build himself a little wall of rocks to protect himself from the canyon winds at night. He went down to the river bottom to find some nice smooth rocks. He found they were too heavy to carry or roll straight up. But Sam was smart he decided he could invent something to help him do this work. He looked around and found a very long dead tree. He broke off all the branches and rolled the tree into position.

Teacher draws a long tree leaning from one side to the other.

Now all Sam had to do was roll the rocks up his new invention to his home. He rolled several big rocks up that day. Sam was so proud of his new invention he got out his stone tablet and drew a picture of it.

Now have students draw their picture on their "stone tablet" on page one. After allowing a few minutes for students to draw begin by discussing how cavemen had not invented numbers yet but Sam wanted to record that this was his first invention. "How could he show that this was his first invention". Have students generate ideas for marking their "stone tablets". (they usually come up with a symbol like a dot or cloud or something and use it once today)

Write on the back of their "stone tablet" the name of the new invention. The inclined plane. Then discuss the other name for this, ramp. May also want to discuss where they have seen ramps.

Day 2

Sam got busy again the next day bringing up some more rocks for building but he soon got tired of rolling rocks up that steep inclined plane. He decided he was smart enough to make another invention. He looked around for a way to make his **work** easier. Pretty soon he had an idea. He found several logs that were just the right size to go across the canyon from one side to the other.

Teacher makes drawing on board to show.

Now Sam was having an easier time rolling the rocks up. It took him longer but each one was easier. He was proud of his new invention and quickly made a picture of it on his stone tablet.

Now have the students make their own drawing of this invention.

After a few minutes drawing time have students use the same method they used yesterday to show that this is his second invention by showing the symbol they chose twice.

Write the name, **screw**, on the back of their "stone tablet".

Day 3

Sam woke up the next morning and had nowhere to sit to eat his breakfast, so he decided he would need a big flat sitting rock. When he went down to the stream he found a perfect one but it was stuck.

He needed help to lift it. He decided he would have to make another invention to help make this **work** easier. He thought and thought.

He finally came up with an idea. He found a small rock and placed it in front of the big sitting rock and grabbed a large tree branch. He pushed the tree branch in between the two and pushed on it to help him lift the edge of the sitting rock.

Teacher draws picture of Sam using his lever.

Now that it was lifted on it's edge he could roll it up the screw and put it in his house.

Day 4

Sam had a nice place now and he felt proud of his accomplishments. But now he realized he had no one to share it with and he began to feel lonely. He thought it was about time he started to look for a "special someone". He went to the land on the other side of the canyon because he had never met anyone who lived over there. By lunchtime he spotted some people out for a picnic. When he went over to say "hi" he was struck by cupid's arrow. It was love at first sight for both of them. Her name was Sally. He asked if he could meet her tonight for dinner at her parent's house. She said "yes".

Sam went home to get ready. He realized he better make a good impression on her parents or they might not let him marry her. He had to find a way to show her parents that he was a nice person and would be a kind husband to Sally. If he could invent something to use that would be a good idea. He decided to make the **work** of sharing the dinner bread easier so everybody didn't have to break off a piece and some people always got a larger piece. He found a piece of stone and shaped it with a sharp edge on one side and tied the other end to a wooden stick for a handle.

Teacher draws a wedge, sort of like a stone age axe, cutting a big round loaf of bread, or draw Sam at the dinner table cutting the bread.

He made it on time to dinner and cut the bread for everyone with his new invention and Sally's parents saw how smart Sam was for making a new invention and how kind he was to split the bread evenly for everyone. Sally's parents were pleased to say yes when Sam asked for their daughter's hand in marriage. Sally and Sam jumped for joy.

They were married soon after and went to live in Sam's new house.

Now students should draw their picture of Sam at Sally's for dinner. When ready have them draw the same symbol four times to show his fourth invention.

Write the name, **wedge** on back of "stone tablet".

Day 5

When Sally had been there awhile she suggested to Sam that they go back to her parents house and pick up her nice big king size sleeping rock. Sam agreed this would be nice. When they got there they realized it was too heavy to move. Sam was going to need to invent some way to help get this **work** done. He found some logs and tied them together. He put the big sleeping rock on top. Then he put some round rocks underneath.

Teacher draws a picture of this "raft of wheels".

Now all Sam had to do was push on the back end of the whole thing until it was time to put some more rocks under the front end. In this way he was able to roll the big king-sized sleeping rock back to their house. This made Sally very happy. Sam was quite happy about this fifth invention and so he made a stone drawing of it.

Have students make the drawing on their "stone tablet". Then show that this is invention number five with their symbols.

Write on the back of the page the **wheel**.

Day 6

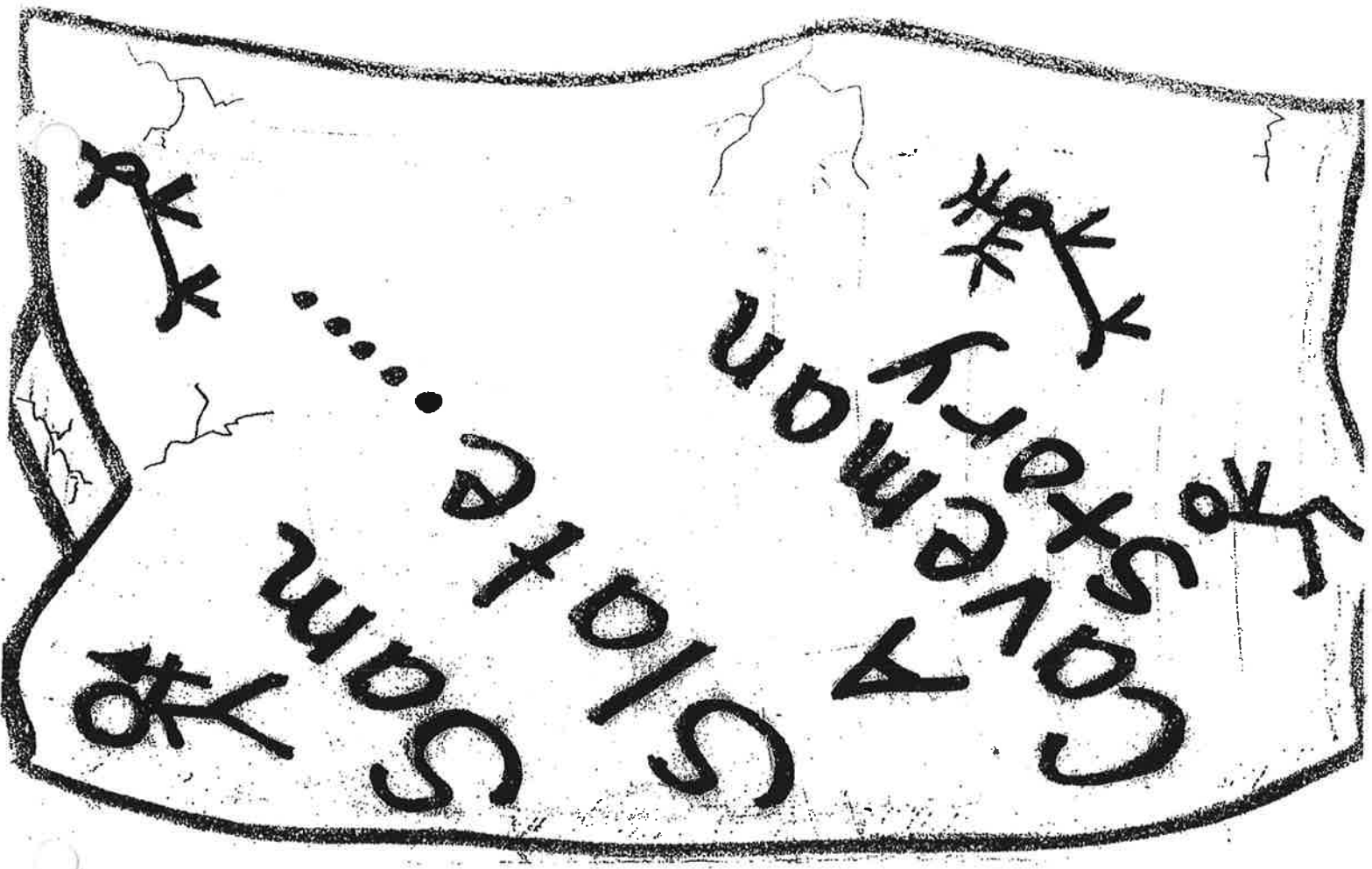
Now Sam and Sally were quite happy. Then one day Sally decided that since her husband was so smart and so nice she wanted to do something nice for him. She decided that she would invent something to make his day a bit easier. Every morning Sam went down to the bottom of the canyon to fetch a bucket of water for drinking and washing. Sally thought she could find a way to make this **work** easier for Sam. She tied their water bucket to a long rope and found two small round rocks and tied them together. She then tied these to a long pole hanging over the edge of the canyon. Now she put the rope over the center of the two rocks and as they rolled around it let the rope and bucket go up and down. The next day she taught Sam how to use her new invention.

Teacher draws a rope going over a pulley tied to a bucket on the end.

Sam was so proud of his wife's new invention he quickly made a picture of it on his stone tablet.

Student's draw it on their "stone tablet" and show that this is invention number six.

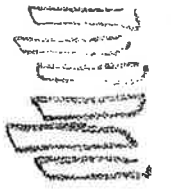
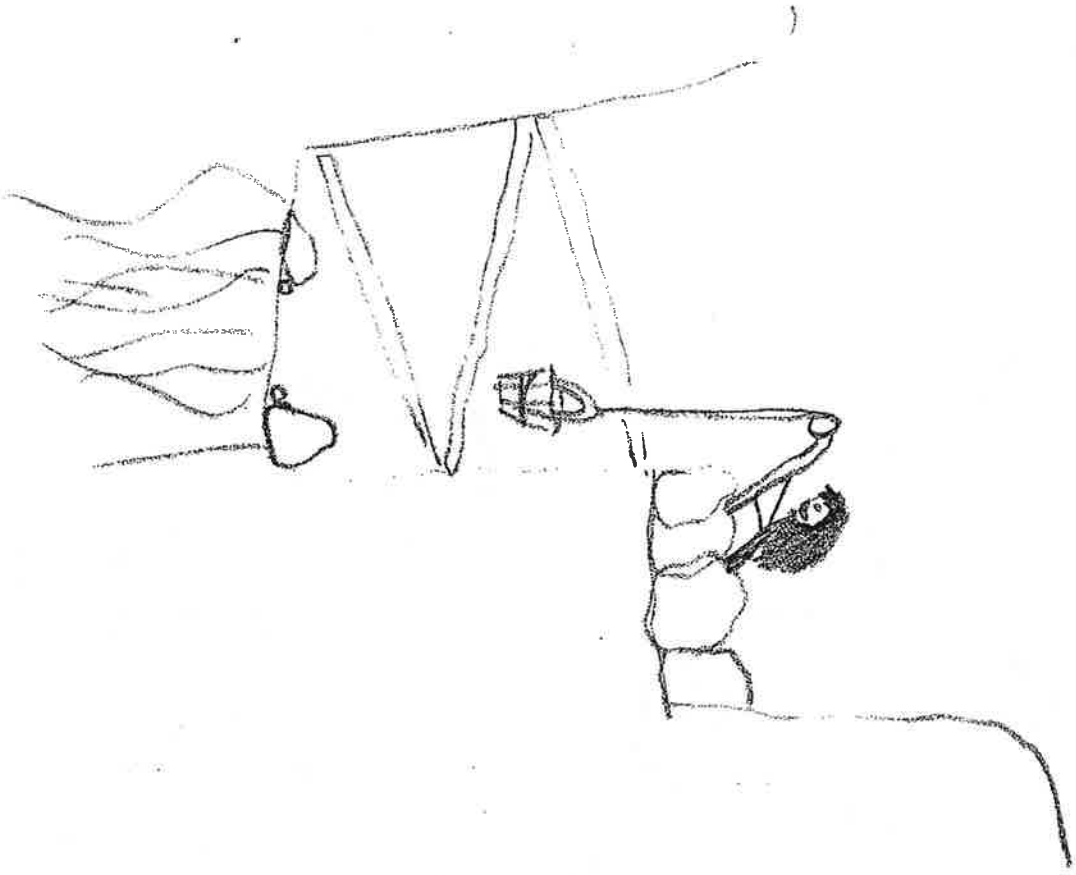
Write the name on the back, **pulley**.



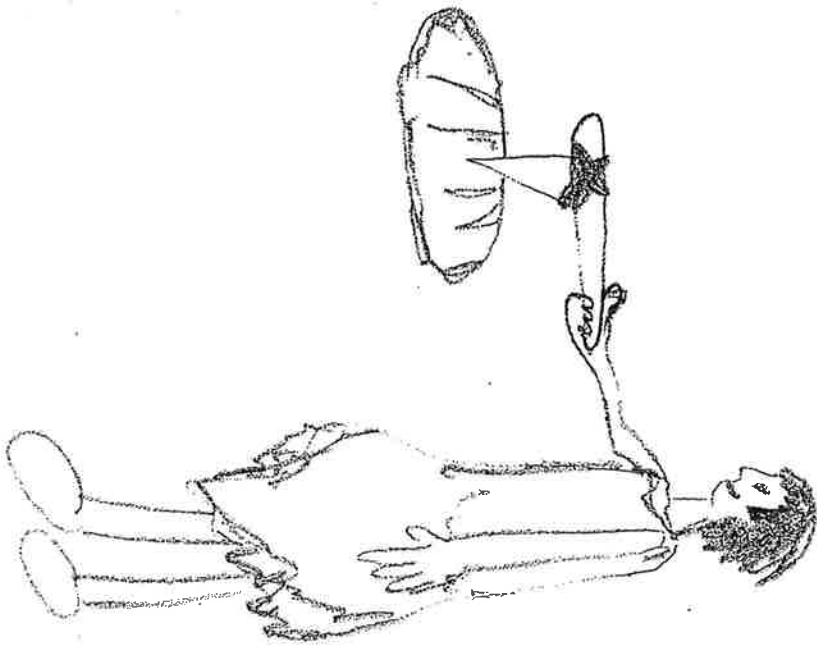
Cave off inc.

Fold in middle for a book

Pulley



Wedge

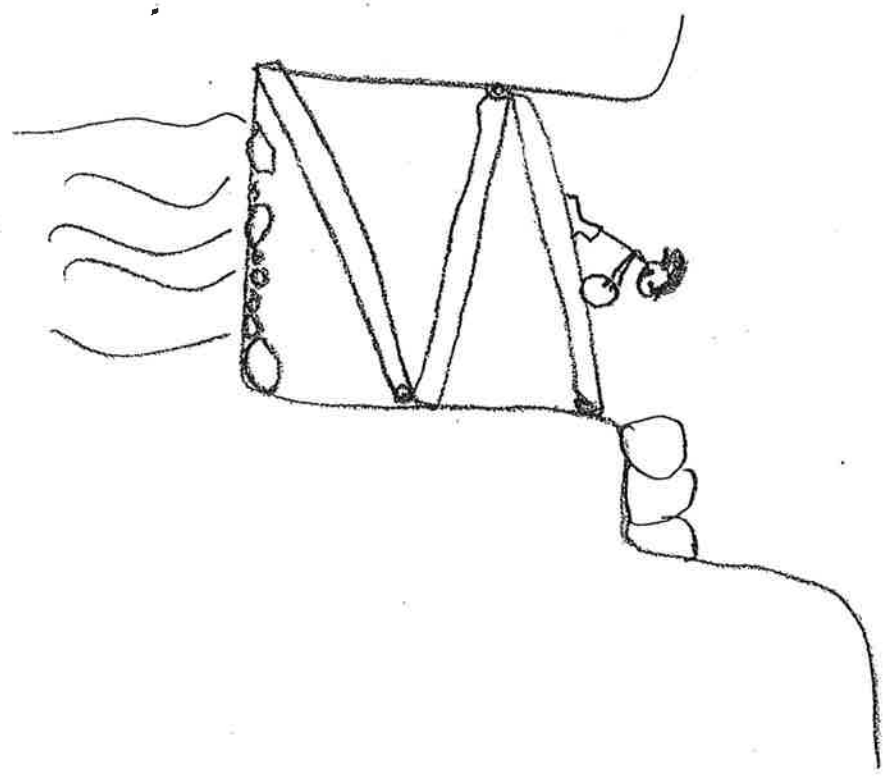
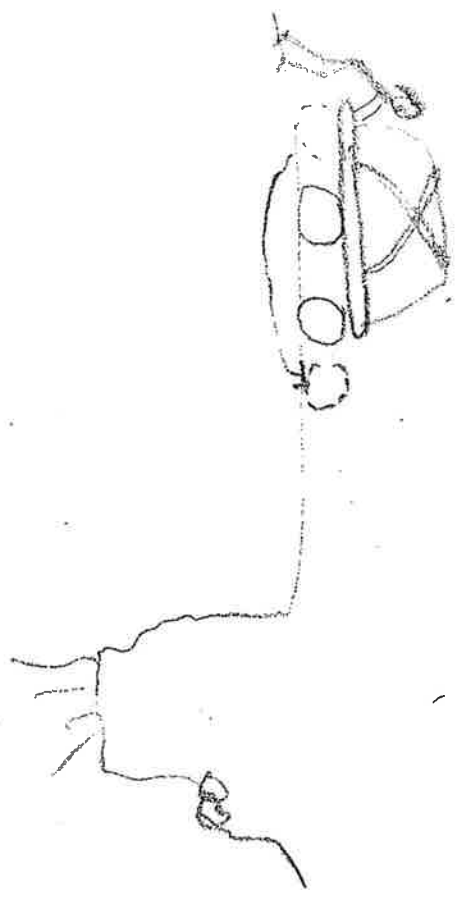


Wheel

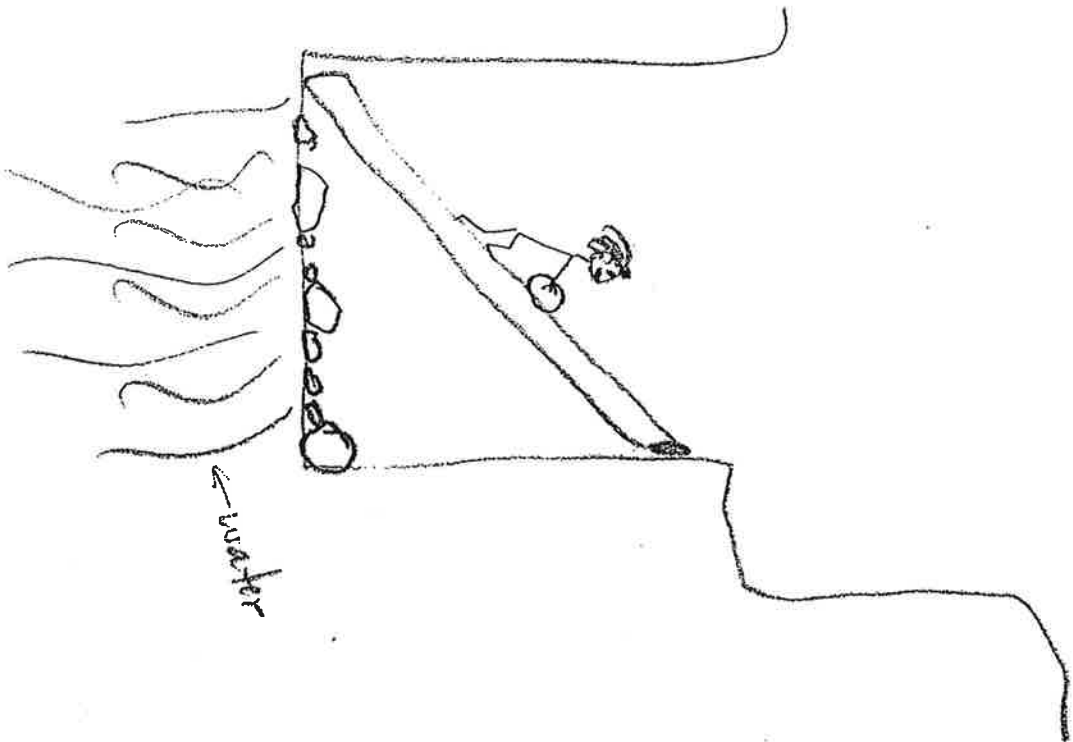
DDDD

Screw

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Inclined Plane



Lever

