

D.20

School: McKelvy Fulton

Group: CSD CRO

Name: _____ Age: _____

Name: _____ Age: _____

Boys Girls Mixed

Interview Number. 1 2 3 4

WRITE ORDER OF SORTING HERE - order them from worst to best

4th 3rd 2nd 1st

_____ (child's initials if needed) _____

_____ (child's initials if needed) _____

Appendix D2:

**Interview Two Protocols:
Heat and Insulation**

INTERVIEW PROTOCOL: CRO- Fulton/McKelvy

Hi. My name is _____, and today I would like to talk with you about some of the things we've been doing here this week.

Part I

- 1) What kinds of things did you see on CRO this week? (This is to see if kids spontaneously mention content vs. storyline)
- 2) One episode of CRO was about WINDMILLS and the other one was about HEAT AND INSULATION.

What did you think about these CRO shows?
Did you like them or not like them? Why?

- 3) Would you want to find out more about WINDMILLS?
(If YES:) Why?
(If NO:) Why not?

Would you want to find out more about HEAT & INSULATION?
(If YES:) Why?
(If NO:) Why not?

- 4) While you were watching the show, were you thinking about anything or doing anything, or were you just watching?
(If thinking or doing:) What were you thinking about/what were you doing?

- 5) Did you talk with anyone about the stuff you saw on these two CRO shows?
(If YES:) Who did you talk to about CRO?
What did you talk about?

- 6) Was there anything that you did after you watched the shows to find out more about the stuff in the shows?
(If YES:) What did you do?
(If NOT topic-related:) Did you do anything to find out more about WINDMILLS or HEAT & INSULATION?
(If YES:) What did you do?

(If NO to original question:) Did you do anything to find out more about WINDMILLS or HEAT & INSULATION? (If YES:) What did you do?

PART II

I have here a bunch of pictures from the CRO show you just watched. In this story, the cavemen wanted to take water from a lake near the top of a volcano and use it to make a hot shower for the mammoths.

These are two different ways they tried to build a hot shower.

(Describe each picture in the following order. Try not to let kids start really talking about it at this point. Say something like, Whoa! Wait, there'll be time to talk about these in a minute. Right now I just want to show you each one and make sure you understand the picture.)

(As you describe the pictures, follow along with your finger on the picture, pointing to what and where you are talking about)

A. In this picture they built wooden pipes to bring the hot water down from the top of the volcano. The pipes come down the mountain and go over some hot rocks and the water pours out here at the bottom. Do you understand what's happening in this picture?

B. In this picture they built wooden pipes to bring the hot water down from the top of the volcano. The pipes come down the mountain and go around the hot rocks and the water pours out here at the bottom. Do you understand what's happening in this picture?

Now let's pretend that there was a contest, to see which was the best way to build a hot shower. I want you to decide which of these is the very best way to build a hot shower and should get first prize, which one should get second prize. I want you to work together to figure out which prize to give each picture. Let me know when you both agree on the prize each one should get. *(Interviewer withdraws and lets dyad talk and order pictures.. Give them a maximum of 5 minutes to do this. Don't tell them how much time they will have, but when they only have a minute left:*

Tell them: "You only have another minute or so to decide, so do the best you can and let me know as soon as you're done."

Once dyad tells interviewer that they agree... or time is up...

Okay, so you think that this one gets second prize *(point to picture at left)* and this one gets first prize *(point to right)*? *(This is to check that the order goes left to right = worst to best.)*

Do you both agree with this? *If no agreement (time is up or stalemate reached), interviewer asks each partner to explain own reasons for order following protocol: for Q.1-2)*

Mark order on cover sheet. Sorting task 1.

Q.1. Okay, you said that this way of building a hot shower would get second prize. Why does this way get second prize?

Q.2. And this way of building a hot shower would get first prize, right? Why is this a better way for them to build a hot shower?

(IF CHILD DOESN'T TALK ABOUT TEMPERATURE OF WATER:) Would one way give them a hotter shower or would the water be the same temperature when it pours out at the bottom on this one and that one? Why *(would they be the same or different temperature)?*

Q.3 Now I'm going to show you a different group of drawings that show more about how they tried to build a hot shower.

[Describe each picture in the following order. For each picture there are two frames, one showing the entire shower and one focusing on the tank or output at the end. Make sure that they understand that the enlargements are the same tank/output device as in the associated picture]

A. In this picture they have put a tank at the bottom of the wooden pipes that go over the hot rockq. The tank has a cover on top with a hole in it for the water to come in, and a lot of straw has been tied around the outside of the tank. The water comes out here when you pull this handle. Okay?

B. In this picture they have put a tank at the bottom of the wooden pipes that go over the hot rocks. The tank is open at the top for the water to go in. The water comes out here when you pull this handle.

C. And in this picture, the pipes go over the hot rocks. There is no tank at the bottom so the water comes out here, straight from the pipe.

Now I want you to decide which of these three different ways should get first prize for the best way to build a hot shower, which should get second prize and which should get third prize. You should try to agree on which prize each one should get.

Okay, so you think that this one gets 3rd prize, this one gets 2nd prize, and this one gets 1st prize, right? Do you both agree?

Mark order on cover sheet, Sorting Task 2.

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Q.4. You said that this way of building a hot shower would get third prize. Why do you think this way should get third prize?

Q.5. And this way of building a hot shower would get second prize, right? Why is this a better way for them to build a hot shower?

(IF CHILDREN DON'T TALK ABOUT TEMPERATURE OF WATER:) Would this way give them a hotter shower or would the water be the same temperature as when it comes out of this one (the third prize picture)?

Q.6. You said that this way of building a hot shower would get first prize. Do you both agree? Why is it better than these other ways?

(IF CHILDREN DON'T TALK ABOUT TEMPERATURE OF THE WATER:) Which way would give them the hottest shower: this way (third prize), this way (second prize), or this way (first prize), or would they all be the same? Why (would they be the same or different temperature)?

(IF THIS QUESTION IS FULLY & CLEARLY ANSWERED ELSEWHERE IN THE PROTOCOL, THERE IS NO NEED TO REPEAT IT)

Q.7. IF CHILDREN SAY THAT THE INSULATED TANK WILL KEEP WATER HOT OR SOMETHING SIMILAR TO THAT:) You said that this way of building the shower would keep the water hot. How does it do that?

IF CHILDREN DIDN'T CLEARLY SAY THAT WATER WOULD BE HOT:) Would this way of building a shower give you a hot shower?

(IF YES:) How does it keep the water hot?

(IF NO:) Why not?

INTERVIEW PROTOCOL: CARMEN- Fulton/McKelvy

Hi. My name is _____, and today I would like to talk with you about some of the things we've been doing here this week.

Part I

- 1) What kinds of things did you see on CARMEN SANDIEGO this week?
(This is to see if kids spontaneously mention content vs. storyline)
- 2) One episode of CARMEN was about ART and the other one was about CATS.

What did you think about these CARMEN shows?
Did you like them or not like them? Why?

- 3) Would you want to find out more about ART?
(If YES:) Why?
(If NO:) Why not?

Would you want to find out more about CATS?
(If YES:) Why?
(If NO:) Why not?

- 4) While you were watching the show, were you thinking about anything or doing anything, or were you just watching?
(If thinking or doing:) What were you thinking about/what were you doing?
- 5) Did you talk with anyone about the stuff you saw on these two CARMEN shows?
(If YES:) Who did you talk to about CARMEN SANDIEGO?
What did you talk about?
- 6) Was there anything that you did after you watched the shows to find out more about the stuff in the shows?
(If YES:) What did you do?
(If NOT topic-related:) Did you do anything to find out more about ART OR CATS?
(If YES:) What did you do?

(If NO to original question:) Did you do anything to find out more about ART OR CATS? (If YES:) What did you do?

PART II

I have here a bunch of pictures from another comic book about the cavemen and mammoths like the ones I showed you last week.. In this story, the cavemen wanted to take water from a lake near the top of a volcano and use it to make a hot shower for the mammoths.

These are two different ways they tried to build a hot shower.

(Describe each picture in the following order. Try not to let kids start really talking about it at this point. Say something like, Whoa! Wait, there'll be time to talk about these in a minute. Right now I just want to show you each one and make sure you understand the picture.)

(As you describe the pictures, follow along with your finger on the picture, pointing to what and where you are talking about)

A. In this picture they built wooden pipes to bring the hot water down from the top of the volcano. The pipes come down the mountain and go over some hot rocks and the water pours out here at the bottom. Do you understand what's happening in this picture?

B. In this picture they built wooden pipes to bring the hot water down from the top of the volcano. The pipes come down the mountain and go around the hot rocks and the water pours out here at the bottom. Do you understand what's happening in this picture?

Now let's pretend that there was a contest, to see which was the best way to build a hot shower. I want you to decide which of these is the very best way to build a hot shower and should get first prize, which one should get second prize. I want you to work together to figure out which prize to give each picture. Let me know when you both agree on the prize each one should get. (*Interviewer withdraws and lets dyad talk and order pictures.. Give them a maximum of 5 minutes to do this. Don't tell them how much time they will have, but when they only have a minute left:*

Tell them: "You only have another minute or so to decide, so do the best you can and let me know as soon as you're done."

Once dyad tells interviewer that they agree... or time is up...

Okay, so you think that this one gets second prize (*point to picture at left*) and this one gets first prize (*point to right*)? (*This is to check that the order goes left to right = worst to best.*)

Do you both agree with this? *If no agreement (time is up or stalemate reached), interviewer asks each partner to explain own reasons for order following protocol: for Q.1-2)*

Mark order on cover sheet. Sorting task 1.

Q.1. Okay, you said that this way of building a hot shower would get second prize. Why does this way get second prize?

Q.2. And this way of building a hot shower would get first prize, right? Why is this a better way for them to build a hot shower?

(IF CHILD DOESN'T TALK ABOUT TEMPERATURE OF WATER:) Would one way give them a hotter shower or would the water be the same temperature when it pours out at the bottom on this one and that one? Why (would they be the same or different temperature)?

Q.3 Now I'm going to show you a different group of drawings that show more about how they tried to build a hot shower.

[Describe each picture in the following order. For each picture there are two frames, one showing the entire shower and one focusing on the tank or output at the end. Make sure that they understand that the enlargements are the same tank/output device as in the associated picture]

A. In this picture they have put a tank at the bottom of the wooden pipes that go over the hot rocks. The tank has a cover on top with a hole in it for the water to come in, and a lot of straw has been tied around the outside of the tank. The water comes out here when you pull this handle. Okay?

B. In this picture they have put a tank at the bottom of the wooden pipes that go over the hot rocks. The tank is open at the top for the water to go in. The water comes out here when you pull this handle. Do you understand the picture?

C. And in this picture, the pipes go over the hot rocks. There is no tank at the bottom so the water comes out here, straight from the pipe. Do you understand the picture?

Now I want you to decide which of these three different ways should get first prize for the best way to build a hot shower, which should get second prize and which should get third prize. You should try to agree on which prize each one should get.

Okay, so you think that this one gets 3rd prize, this one gets 2nd prize, and this one gets 1st prize, right? Do you both agree?

Mark order on cover sheet, Sorting Task 2.

Q.4. You said that this way of building a hot shower would get third prize. Why do you think this way should get third prize?

Q.5. And this way of building a hot shower would get second prize, right? Why is this a better way for them to build a hot shower?

(IF CHILDREN DONT TALK ABOUT TEMPERATURE OF WATER:) Would this way give them a hotter shower or would the water be the same temperature as when it comes out of this one (the third prize picture)?

Q.6. You said that this way of building a hot shower would get first prize. Do you both agree? Why is it better than these other ways?

(IF CHILDREN DONT TALK ABOUT TEMPERATURE OF THE WATER:) Which way would give them the hottest shower: this way (third prize), this way (second prize), or this way (first prize). or would they all be the same? Why (would they be the same or different temperature)?

(IF THIS QUESTION IS FULLY & CLEARLY ANSWERED ELSEWHERE IN THE PROTOCOL, THERE IS NO NEED TO REPEAT IT)

Q.7. IF CHILDREN SAY THAT THE INSULATED TANK WILL KEEP WATER HOT OR SOMETHING SIMILAR TO THAT:) You said that this way of building the shower would keep the water hot. How does it do that?

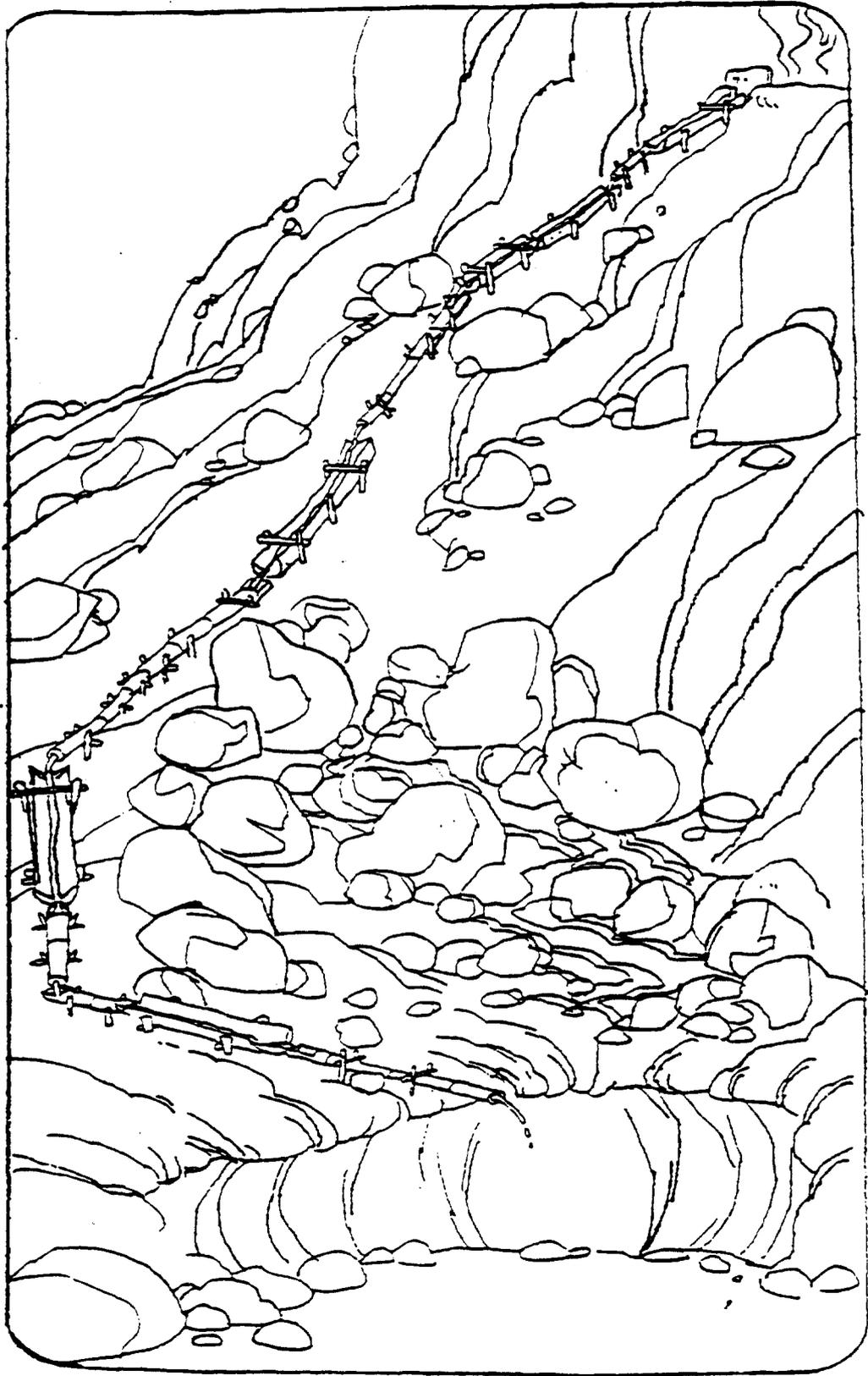
IF CHILDREN DIDNT CLEARLY SAY THAT WATER WOULD BE HOT:) Would this way of building a shower give you a hot shower?

(IF YES:) How does it keep the water hot?

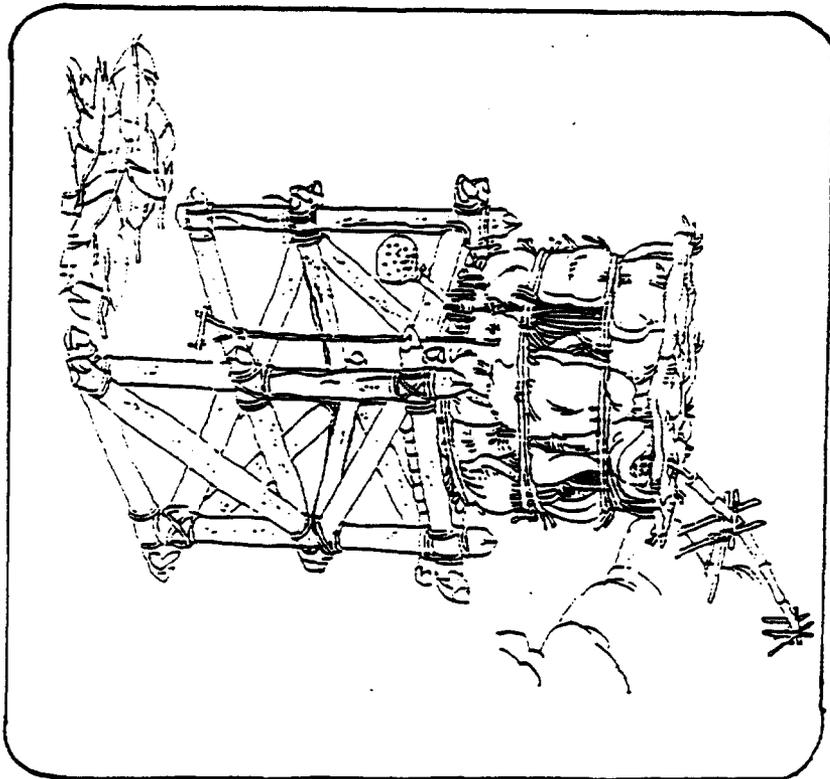
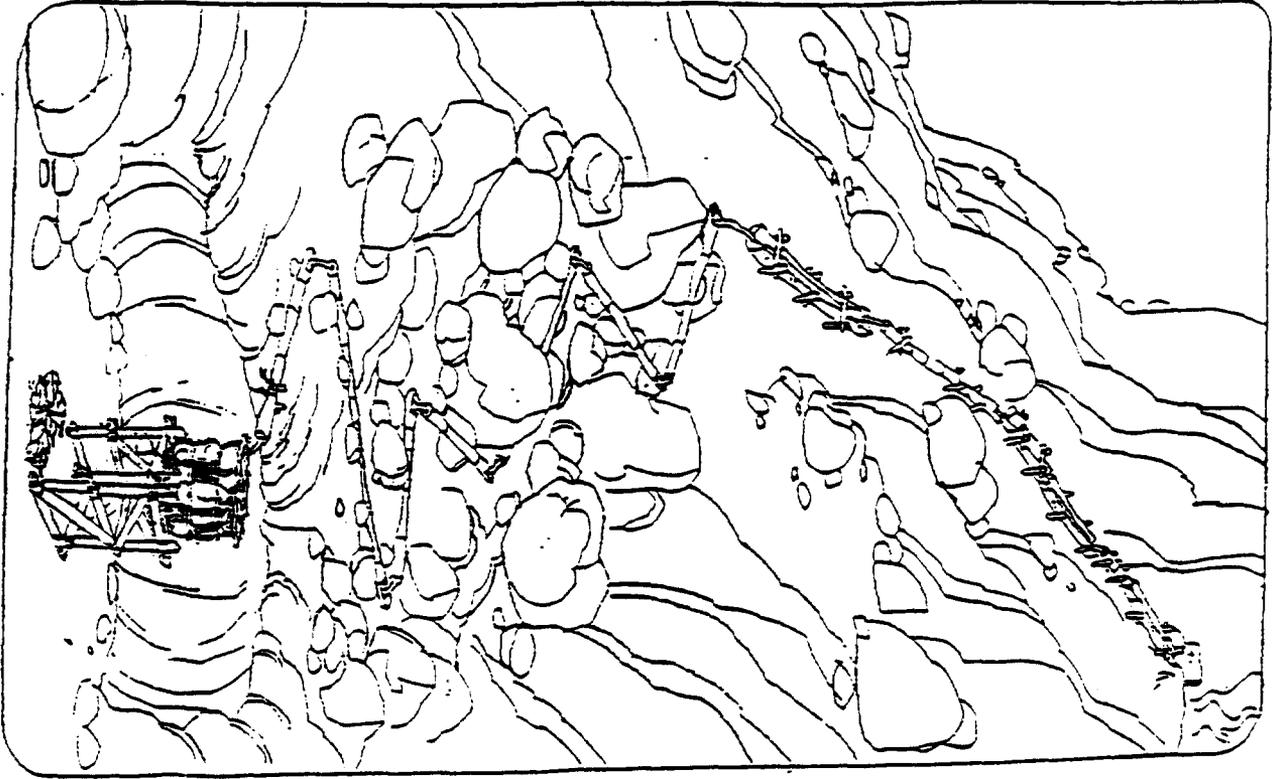
(IF NO:) Why not?

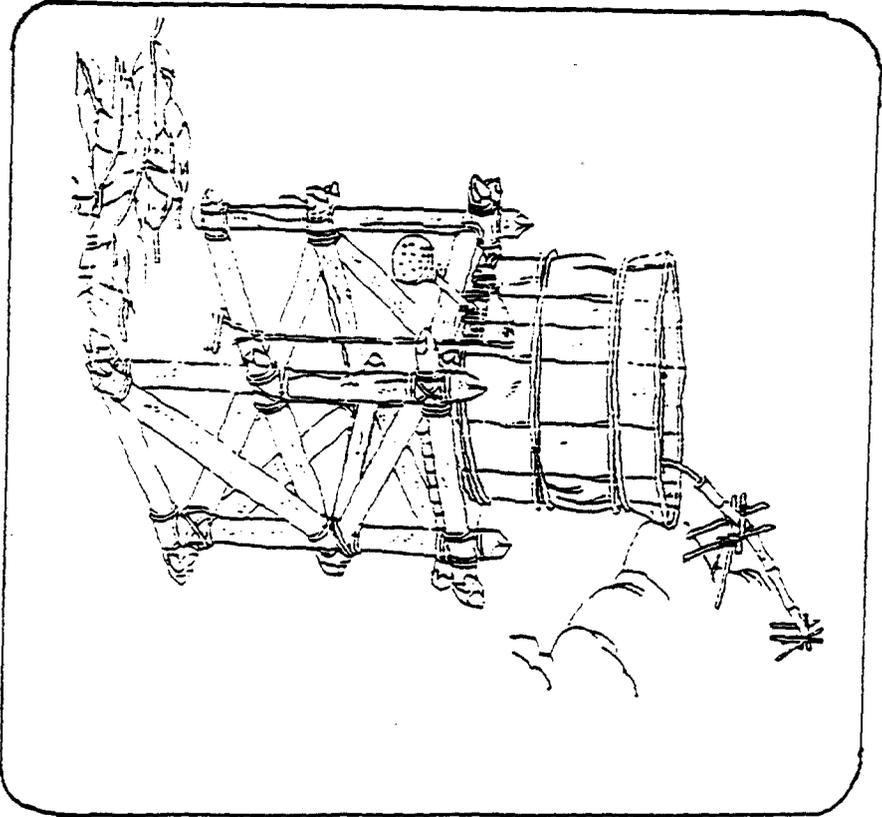
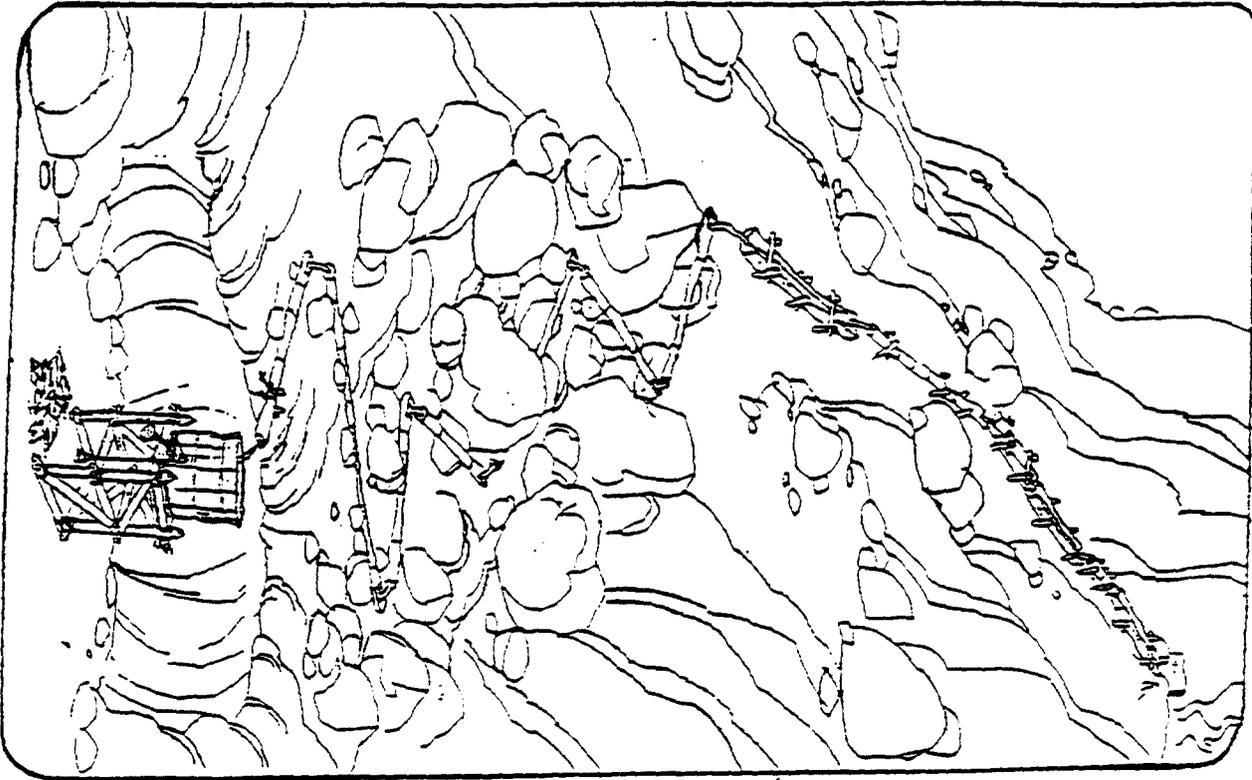


OVER ROCKS

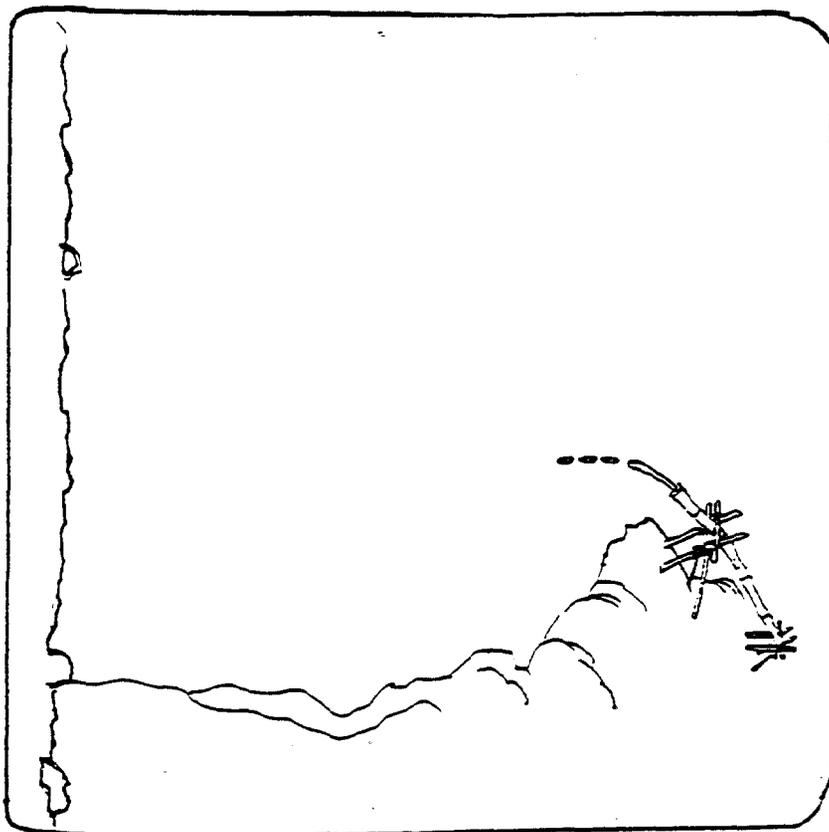


AROUND ROCKS





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Appendix D3:
Interview Three Protocols:
Timekeepers

INTERVIEW PROTOCOL: CRO- Fulton/McKelvy

Hi. My name is _____, and today I would like to talk with you about some of the things we've been doing here this week.

Part I

- 1) What kinds of things did you see on CRO this week? (This is to see if kids spontaneously mention content vs. storyline)
- 2) One episode of CRO was about _____ and the other one was about WHEELS & BELTS and the other one was about TIMEKEEPERS.

What did you think about these CRO shows?
Did you like them or not like them? Why?

- 3) Would you want to find out more about WHEELS & BELTS?
(If YES:) Why?
(If NO:) Why not?

Would you want to find out more about TIMEKEEPERS?
(If YES:) Why?
(If NO:) Why not?

- 4) While you were watching the show, were you thinking about anything or doing anything, or were you just watching?
(If thinking or doing:) What were you thinking about/what were you doing?
- 5) Did you talk with anyone about the stuff you saw on these two CRO shows?
(If YES:) Who did you talk to about CRO?
What did you talk about?
- 6) Was there anything that you did after you watched the shows to find out more about the stuff in the shows?
(If YES:) What did you do?
(If NOT topic-related:) Did you do anything to find out more about WHEELS & BELTS or TIMEKEEPERS?
(If YES:) What did you do?

(If NO to original question:) Did you do anything to find out more about WHEELS & BELTS or TIMEKEEPERS? (If YES:) What did you do?

PART II

I have here a bunch of pictures from the CRO show you just watched. In this story, the cavemen have to take turns babysitting a young mammoth. They don't have clocks, so they want to build something that can keep time and tell them when it is time for the next person to babysit. They try a bunch of different ways.

These are three different ways they tried to keep time.

(Describe each picture in the following order. Try not to let kids start really talking about it at this point. Say something like, Whoa! Wait, there'll be time to talk about these in a minute. Right now I just want to show you each one and make sure you understand the picture.)

(As you describe the pictures, follow along with your finger on the picture, pointing to what and where you are talking about)

A. In this picture they built this thing, which uses sand. When someone starts to babysit, they fill the top part with sand, and the sand falls through a hole at the bottom of the cone. When all the sand runs out, then it is time for the next person to babysit. Do you understand what's happening in this picture?

B. In this picture they build this thing, which uses water. Water drips into this tank and then drips into this other tank on the bottom. As the bottom tank fills up with water, it pushes this piece of wood up. As the piece of wood comes up, it hits these marbles. This makes the marbles roll down here and hit this chime that rings. Each time the chime rings, it is time for the next person to babysit. Do you understand what's happening in this picture?

C. In this picture they have taken two buckets. One bucket is filled with pebbles and the other bucket is empty. The person who is babysitting has to move the pebbles from one bucket into the other bucket. When all of the pebbles have been moved into the other bucket, it is time for the next person to babysit.

Now let's pretend that there was a contest, to see which was the best way to keep time. I want you to decide which of these is the very best way to keep time and should get first prize, which one should get second prize, and which one is the worst way and should get third prize. I want you to work together to figure out which prize to give each picture. Let me know when you both agree on the prize each one should get. (*Interviewer withdraws and lets dyad talk and order pictures.. Give them a maximum of 5 minutes to do this. Don't tell them how much time they will have, but when they only have a minute left:*

Tell them: "You only have another minute or so to decide, so do the best you can and let me know as soon as you're done."

Once dyad tells interviewer that they agree... or time is up...

Okay, so you think that this one gets third prize, this one gets second prize and this one gets first prize? (*This is to check that the order goes left to right = worst to best.*)

Do you both agree with this? *If no agreement (time is up or stalemate reached), interviewer asks each partner to explain own reasons for order following protocol: for Q.1-3)*

Mark order on cover sheet

Q.1. Okay, you said that this way of keeping time would get third prize. Why does this way get third prize?

Q.2. And this way of keeping time is better, and would get second prize, right? Why is this a better way for keeping time?

Q.3. Okay, you said that this was the best way for keeping time and should get first prize. Why is this the best way for keeping time?

INTERVIEW PROTOCOL: CARMEN- Fulton/McKelvy

Hi. My name is _____, and today I would like to talk with you about some of the things we've been doing here this week.

Part I

- 1) What kinds of things did you see on CARMEN SANDIEGO this week?
(This is to see if kids spontaneously mention content vs. storyline)
- 2) One episode of CARMEN was about DINOSAURS and the other one was about CHESS.

What did you think about these CARMEN shows?
Did you like them or not like them? Why?

- 3) Would you want to find out more about DINOSAURS?
(If YES:) Why?
(If NO:) Why not?

Would you want to find out more about CHESS?
(If YES:) Why?
(If NO:) Why not?

- 4) While you were watching the show, were you thinking about anything or doing anything, or were you just watching?
(If thinking or doing:) What were you thinking about/what were you doing?
- 5) Did you talk with anyone about the stuff you saw on these two CARMEN shows?
(If YES:) Who did you talk to about CARMEN SANDIEGO?
What did you talk about?
- 6) Was there anything that you did after you watched the shows to find out more about the stuff in the shows?
(If YES:) What did you do?
(If NOT topic-related:) Did you do anything to find out more about DINOSAURS OR CHESS?
(If YES:) What did you do?

(If NO to original question:) Did you do anything to find out more about DINOSAURS OR CHESS? (If YES:) What did you do?

PART II

I have here a bunch of pictures from another comic book about the cavemen and mammoths like the ones I showed you last week. In this story, the cavemen have to take turns babysitting a young mammoth. They don't have clocks, so they want to build something that can keep time and tell them when it is time for the next person to babysit. They try a bunch of different ways.

These are three different ways they tried to keep time.

(Describe each picture in the following order. Try not to let kids start really talking about it at this point. Say something like, Whoa! Wait, there'll be time to talk about these in a minute. Right now I just want to show you each one and make sure you understand the picture.)

(As you describe the pictures, follow along with your finger on the picture, pointing to what and where you are talking about)

A. In this picture they built this thing, which uses sand. When someone starts to babysit, they fill the top part with sand, and the sand falls through a hole at the bottom of the cone. When all the sand runs out, then it is time for the next person to babysit. Do you understand what's happening in this picture?

B. In this picture they build this thing, which uses water. Water drips into this tank and then drips into this other tank on the bottom. As the bottom tank fills up with water, it pushes this piece of wood up. As the piece of wood comes up, it hits these marbles. This makes the marbles roll down here and hit this chime that rings. Each time the chime rings, it is time for the next person to babysit. Do you understand what's happening in this picture?

C. In this picture they have taken two buckets. One bucket is filled with pebbles and the other bucket is empty. The person who is babysitting has to move the pebbles from one bucket into the other bucket. When all of the pebbles have been moved into the other bucket, it is time for the next person to babysit.