

Lesson:	Comparing the structures and functions of crayfish and land snails
Teacher:	Kim Nickerson
Video URL:	http://education.ucsc.edu/ellisa/case_studies/comparing_structures.html
Clip:	Part 1 Science Talk

Abbreviations:

T = Teacher

S = Student

Ss = Students

1

Transcript

2

[00:00]

3

4

5 T: Just a reminder about our discussion I just realized we don't have our discussion
 6 prompts, but we have been using them all year so you should be remembering them. That
 7 one person talks at a time. Thank you, I'll wait 'till you settle down. That one person
 8 talks at a time, that we have eyes on the speaker, and that we try and stay on one topic,
 9 we can add I'd like to add on or I have a different idea about that topic. Stay on one topic
 10 at a time then we can exchange ideas. And talk about that. Okay? So today we are going
 11 to be comparing and contrasting two organisms. Just two of the organisms that we have
 12 been investigating: the crayfish and snails, the land snails. First though I wanted to make
 13 that we just talk about our schema, our prior knowledge, about the crayfish. What are
 14 some of the interesting structure or behaviors that we've, you've learned about the
 15 crayfish?

16 [1:43]

17 S: I think one of the behaviors is when you try to pick it up it [jumps] backwards fast.

18 S: Another student responds

19 [2:10]

20 T: So using the tails to kind of move quickly to escape a predator? That behavior is pretty
 21 important to survive, and then you mentioned [pincers] one function was help with food
 22 right? Before we leave the pincers did anybody, did anybody have something else to add
 23 about the pincers?

24 [2:34]

25 S: Pincers they sometimes don't have a part of it.

26 T: Yeah we learned that sometimes they are missing a part or they are missing the pincer.

27 S: Another student is responding.

28 [3:03]

29 T: It seems to kind of retreat or withdraw to its house huh?

30 S: If they get scared...

31 T: Absolutely, huh?

32 S: I think ... the coy fish make fun of it [tries to touch it with its tail]

33 [3:27]

34 T: It sure does so it's using it as senses sensory to feel or touch. Similar to the land snail,
 35 huh?

36 S: also... of the crayfish ... so it doesn't...

37 [3:47]

38 T: So kind of different observation with the behavior of how the crayfish uses the antenna
 39 huh?

40 S: Sometimes it goes to play dead sometimes because it goes like this.
41 [4:03]
42 T: We have noticed that behavior, huh? What about you Angela, what's one thing that
43 you found interesting about the structure or the behavior of crayfish?
44 S: That when they the last time when I saw them, they were on top of the house and they
45 were trying to get out, I guess.
46 [4:29]
47 T: Yes, several of us have been noticing the house especially one I forgot what we named
48 it. Was it Hawk? There was one that in groups B's basin who gets on the house a lot.
49 Group A or Group B?
50 S: Group A and Group B
51 T: So maybe for some defense?
52 S: They get on top of the house.
53 T: Maybe for defense or even
54 [4:55]
55 Ss: Yeah, they always go
56 T: Yeah, or maybe what we call territoriality? Trying to protect its territory? Protect its
57 turf? What are ...? Now let's just switch to snails and focusing on snails for a few weeks.
58 So, same question. What are some of the interesting structures or behaviors we have been
59 observing about snails? Can we just go to Alani and Alexia first? Because we haven't
60 heard from them.
61 [5:36]
62 S: They could go inside.
63 T: Interesting similar to what Alina said about the crayfish, huh? It retreats into its shell
64 as a way to protect itself.
65 [6:02]
66 S: Like when it walks something touches its eye then it scoops right in.
67 T: Yeah, we noticed that that the tentacles will retract. So we have talked about the
68 tentacles being ... functioning as sense right? Absolutely. Calvin.
69 [6:23]
70 S: I want to ask a question is that, is there any snails that have baby snails to get food for
71 the papa snail or something when baby snails are in the shell?
72 [6:52]
73 T: I definitely want you to think of that question. We can definitely investigate. What you
74 are thinking about to make that connection to the snails? Is there another organism that
75 you are thinking of that is maybe like the snail, the papa and the baby in some way? What
76 other organism have you observed that way?
77 [7:10]
78 S: I think so but I forgot.
79 T: Or maybe is it something that you observed with our snails in the classroom.
80 S: No, I haven't observed in our classroom but I know I have seen them before I think or
81 heard of it or something
82 [7:41]
83 T: You want to add on?
84 S: I've heard that baby snails is not as big as an adults' snail shell.
85 [7:54]

86 T: Oh, so looking and comparing sizes?
87 Ss: ...
88 T: I do have ... we do. Angelo you can, I just want to give opportunity to people who
89 have not shared yet? And I'd like to go back to kind of what Calvin had said, but Angelo?
90 [8:18]
91 S: ... I made a way and turned around
92 T: So having that kind of ability of sense? Are we talking about the crayfish or the snail?
93 Crayfish. So using the antenna like Alina and Jasmine said also remember they have the
94 bristles that they say they use for senses, too? Alright. Brandon?
95 [8:52]
96 S: Snails have coiled shell.
97 T: And what's the coiled shell for? What's the function?
98 [8:59]
99 S: It protects it tells interesting things it tells like if the snail is right handed or left
100 handed... if the spiral is coiled to the right the snail is right handed. If its coiled to the
101 left, it's left handed.
102 [9:27]
103 T: It said in your? Brandon where did you learn this information?
104 S: From the book.
105 T: So evidence is some research in the book. Question, can we go back to Calvin? Calvin
106 had mentioned something. And that's okay. Calvin had mentioned something. Calvin
107 had said he was wondering about the baby snail and the papa snail. He had said, 'you
108 know I didn't observe it with the snails in our classroom, but I have observed it other
109 places.' Do you know where you, where have you made another snail observations?
110 [10:20]
111 S: Brittany said in your backyard, and I said yeah.
112 [10:24]
113 T: And you remembered? Just a show of hands how many of you have ...
114 S: Ss talking ...
115 [10:45]
116 T: And you also have Ms. Landes' class right. So since we have been investigating snails
117 in our class as well Ms. Landes' class for the last few weeks. Have you been noticing
118 snails more? It sounds like Calvin has seen.
119 [11:11]
120 S: I didn't see that, but I think I have heard of it somewhere, that something goes into
121 something elses' shell.
122 T: Marissa, can you tell us you said yeah! Can you tell us about it?
123 [11:30]
124 S: Well, so there are a couple of things that I have been noticing about the snails like
125 sometimes they stay in their shells even if there's water in it, and sometimes they don't.
126 But the ones that we have in our classroom they stay in their shell but if you put water in
127 it, they come out.
128 [11:54]
129 T: Do you remember what we called that? No? I did write it out on out word chart. The
130 word was estivate. Say it with me es-ti-vate. We will talk a little bit more about after we
131 recess about estivate, we had talked yesterday it was like a summer sleep. But Marissa, I

132 can tell you have definitely been observing snails because you brought in a snail
133 collection for the class, huh? And Marissa, can you us tell us a little bit more about what
134 inspired you to do that? Why did you bring those in?
135 [12:13]
136 S: I was thinking that was the best because you had to share. So I was thinking I should
137 bring them in. so everybody gets one to [share] so they can do whatever they want so
138 they don't have to wait for their partner to sit so everybody can do it and they don't have
139 to wait for the next day. So everybody gets their own.
140 [13:01]
141 T: And where did you collect your snails?
142 S: So my grandma has big, long leaves we found them in there.
143 T: Big, long leaves. Let's talk ... remember one at a time. And could I have everyone
144 scoot back a little? So I will be able to see everybody. So we can see Christian and JJ.
145 Ulysses has something to say.
146 [13:36]
147 S: If you go down the hall outside the door, that pathway has a lot of snails
148 T: And what's out there?
149 S: Plants.
150 T: A lot of plants huh? Are they similar plants to what Marissa said or are they? They are
151 long leaves too? Interesting. Seems like you have been observing them a little bit more.
152 So on our way to school, in our backyard, absolutely. Okay, Natalie.
153 [14:10]
154 S: I remember my cousin telling me after Sunday because it was Easter. She went outside
155 to see if there were any eggs left she looked where the leaves are, where the snails were
156 and there was an egg there. She opened it and the snails were actually eating the egg and
157 she also told me that the snails also live in the dirt areas and the leafy areas.
158 [14:42]
159 T: Did she tell you why?
160 S: No but she told me that her mother's [flowers] makes great food for those snails.
161 [15:00]
162 T: It's interesting that Ulysses, you and Marisa observed that long leaves and maybe we
163 could investigate a little bit about where to find snails but is there a certain type of
164 climate is there a kind of shrub or bush that they live in because you just mentioned
165 leaves.
166 [15:26]
167 S: She also told me that it's like marshy area so it's kind of wet and moist at the bottom
168 and also on the top of the leaves it get really sunny so they have to stay in the moist area.
169 S: Like in the middle, that's where I find all my snails.
170 [15:43]
171 T: Sue did you hear that part? Can you repeat that so they can hear it?
172 S: So if it's really sunny so the top of the leaves is really warm the snail are going to have
173 to stay at the bottom of the moist area.
174 S: Oh.
175 [1:14]
176 T: Have you ever thought about why?

177 S: Well eventually they just get really hot on the sun. Because when it's really hot, I
178 don't see no snails on the walls because it gets really hot and they can't stand the heat so
179 they just stay on the ground.

180 [16:27]

181 T: So the interesting thing that we had noticed last week and make a connection is we had
182 talked about slime. So when the snail moves they leave tracks of slime and we had talked
183 about that was helping the snail move, right? So it's interesting like you said, the sun
184 when it gets hot it might not be able to move as well. It needs to stay moist in order to
185 move. We have one more person we haven't heard from that wanted to say something.
186 Lauren?

187 [17:06]

188 S: You know how you said that the slime helps it move...Slime is the only thing that
189 helps it move ...

190 [17:39]

191 T: Yeah and then it can potentially be hurt, injured, or a predator could get it. I know, I
192 know we are still going to talk about this on Thursday. Hold on. Let me finish my
193 thought. After recess, we are going to be able to continue our conversation. After recess
194 we are all going to need to use our schema, or prior knowledge, from not just our
195 classroom but, all our environment that we have learned about snails to be able compare
196 and contrast with the crayfish.