

The Twisted Path of Assessment Development

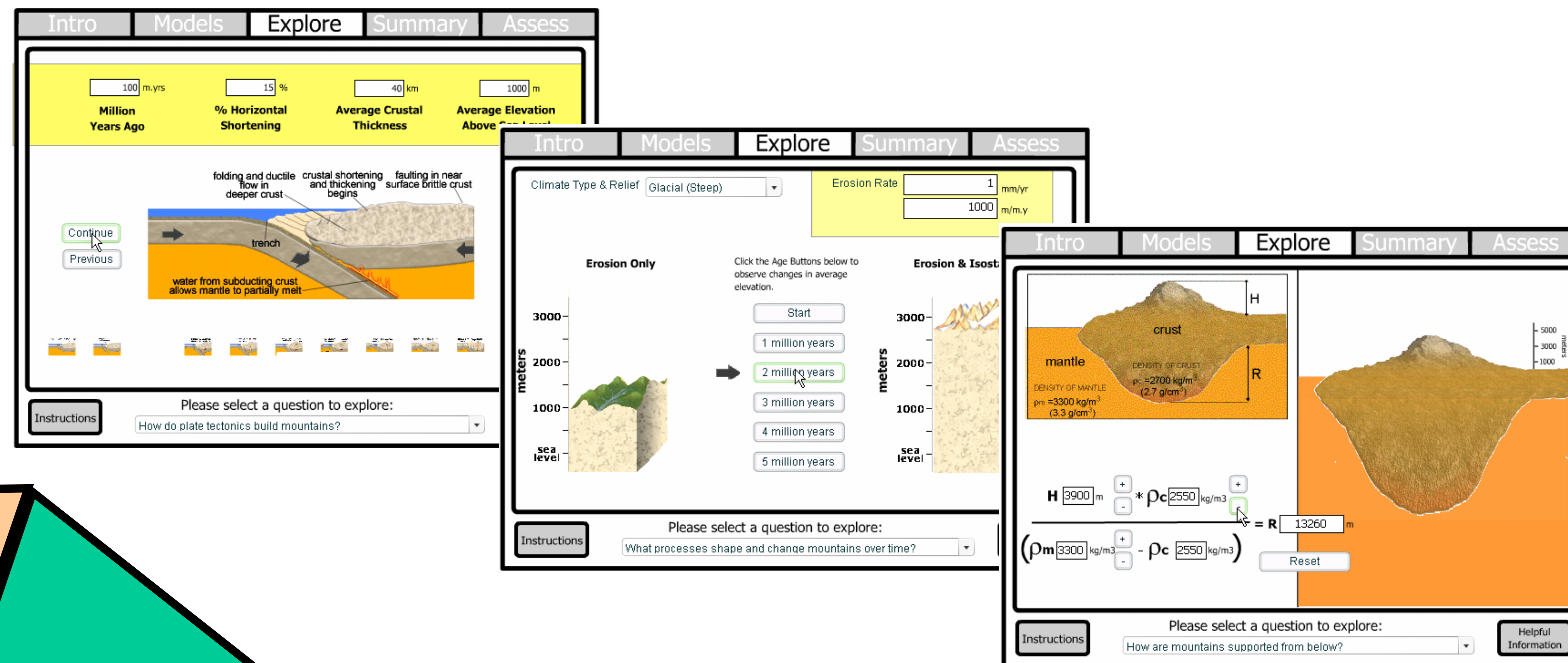
Michelle Malone and Scott Linneman



Share validated
assessment with
community
(e.g. FLAG)

The Problem:

How to assess
the effectiveness
of an interactive
web object about
mountain building



START
HERE



Full of naive optimism.
Move ahead one space.



What seems simple is not.
PKS list grows to 40.
Go back one space.

Validate PKS
with geology
faculty



Faculty can't agree
on 3 of 27 PKS.
Go back one space.

Review
misconceptions
literature about
mountain building
and plate tectonics



Develop and
administer
open-ended
survey of
WWU 101
students

Misconception lit mostly
about kid thinking.
Go back one space.



List
prepositional
knowledge
statements
(PKS)

Pilot
assessment
with Geology
101 students



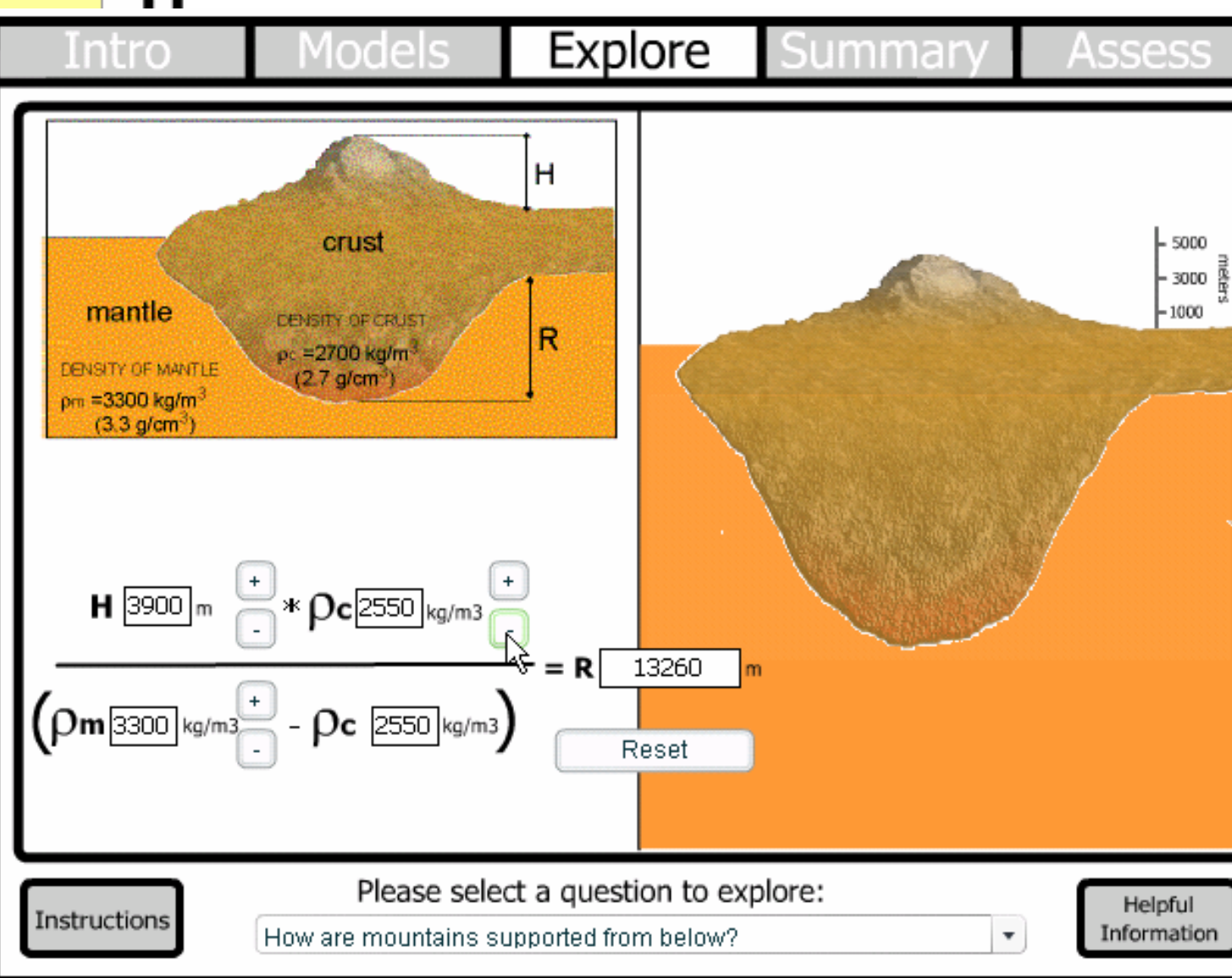
Advisor red-flags
half of items.
Go back one space.

Develop
conceptual
M/C items
(related to
PKS) with
free-response
reasoning



101 students get tired
after 2nd question.
Go back one space.

Interview with
subjects for
item validity



Administer Post-test
(M/C version and
essay version)



Students taking essay version
feel cheated.
Feel sorry for them.
Move ahead one space.

Develop 2-tier
multiple-choice
diagnostic assessment
(1st tier – content,
2nd tier – reasoning)



Advisor and his
red pen again.
Go back one space.

Determine
face validity
for coverage
of PKS and
misconceptions



Coverage!
Go ahead one space.
In a 3 hour test.
Go back one space.

Administer Pre-test
(M/C version and
essay version)



Students taking essay version
write complete answers.
Move ahead one space.

Students taking essay version
get tired, answers short
Go back one space.



Administer
Delayed Post-test
(M/C version and
essay version)



Students want movie tickets to
participate.
Go back one space.
They show up, validate!
Move ahead one space.



FINISH!