Lesson 4 - Student Activity #1 Guide

Modifying the Model Further

Your Challenge: Alter your model to include the formation of hydrated copper ions. First you will need to create additional breeds Cu(II).H_2O, Cu(II).$2H_2O$, Cu(II).$3H_2O$

Copper in water forms a complex with 3 water molecules which makes the solution slowly turn blue as the complex Cu(II).$3H_2O$ forms.

1. Start with modified model from Lesson 3
2. Remix the base model and change its name to include your name and your partner's name.

Reminder: Save and test your model every time you add a piece of code. Debug if needed. Save often.

3. In the Interface (Spaceland) add 3 additional breeds:

Cu(II).$1H_2O$
Cu(II).$2H_2O$
Cu(II).$3H_2O$

Hint: Refer to Lesson 3 on how to add new breeds.

Check the Workspace area. Did new pages/tabs appear?

4. Change the code using collision blocks to create the following agents with their own traits:

Cu(II).H_2O: Shape is sphere, color is cyan and size is 1. It is created when one copper nitrate agent collides with one water molecule.
Cu(II).$2H_2O$: Shape is sphere, color is sky blue and size is 1. It is created when one Cu(II).H_2O agent collides with one water molecule.
Cu(II).$3H_2O$: Shape is sphere, color is blue and size is 1. It is created when one Cu(II).$2H_2O$ agent collides with one water molecule.

The complex Cu(II).$3H_2O$ is the final ionic product created in the solution turning the solution blue.

Tip: It is possible to drag a selection box around a group of blocks on one page, and "copy and paste" them to a new page. This is a real time-saver.

Reminder: Execute your model every time you add a piece of code. Debug if needed. Save often.

5. These new agents are ions moving about in water.
Set up a Wiggle Walk procedure for each agent on its own page.