Name
TA

Chemistry 11
2021-2022

Learning Guide # 12: Physical Properties of Solutions

BIG IDEA: Types of Solutions, Dissolving and Concentration

Fundamental Knowledge (I know)

- ☐ How to explain the terms saturated, unsaturated, super saturated, crystallization and precipitate as they pertain to solutions
- ☐ The processes of dissolving and crystallization can explain "like dissolves like"
- ☐ How to explain the terms: miscible, dipole (temporary and permanent), and solvation
- ☐ The steps needed to convert a solid to concentration in a known amount of liquid
- ☐ How to do concentration calculations and can complete example questions

Curricular Competencies (I can)

	Proficiency Scale Teacher and Student self assessment (Circle one)	**Evidence (How do you know?)**
I can: Connect scientific explorations to careers in science.	**Emerging (EMG)** Initial Understanding **Developing (DEV)** Partial/Near Complete Understanding **Proficient (PRF)** Complete Understanding **Extending (EXT)** Sophisticated Understanding	
Implement multiple strategies to solve problems in real-life, applied, and conceptual situations.	**Emerging (EMG)** Initial Understanding **Developing (DEV)** Partial/Near Complete Understanding **Proficient (PRF)** Complete Understanding **Extending (EXT)** Sophisticated Understanding	

Student Signature: **Teacher Signature:**

Date:

Instructions To help guide your learning, make your way through the activities in Option 1, Option 2, or Option 3. You may "mix and match" between the different Option columns.

TOPIC	OPTION 1	OPTION 2	OPTION 3
Types of Solutions AND Molecular View of the Solution Process	**Create** a glossary of the "Key Words" in chapter 12 for sections **12.1** - **12.3** (Pgs. 504 – 511) **Read** Pages 504 - 507 and **complete Review Question**s: 12.1, 12.2, 12.3, 12.4, 12.5, and 12.7 on Pg. 534 **Complete *"Example: Practice Exercises"*** 12.1 on Pg. 507.	**Create** flash cards for each of the "Key Words" in chapter 12 for sections **12.1** - **12.3** (Pgs. 504 – 511) **Read** Pages 504 - 507 and **complete Review Question**s: 12.1, 12.2, 12.3, 12.4, 12.5, and 12.7 on Pg. 534 **Complete *"Example: Practice Exercises"*** 12.1 on Pg. 507.	**Choose your own adventure!** Pick up a planning sheet from the Science Kiosk. Create a plan! Make sure you read through the first page of this LG, as you will need to design ways to learn/practice and show your understanding of the topic(s) and skill(s) (competencies.) You will need to have a teacher approve your plan before beginning the LG.
Concentration	**Read** Pages 507 - 511 and **complete Review Question**s: 12.13, 12.14, and 12.25 on Pg. 535 **Complete *"Example: Practice Exercises"*** 12.2 on Pg. 508.	**Read** Pages 507 - 511 and **complete Review Question**s: 12.13, 12.14, and 12.25 on Pg. 535 **Complete *"Example: Practice Exercises"*** 12.2 on Pg. 508.	
Chapter Review	**Complete *"problems" 12.9, 12.10, 12.11 and 12.12***		
Lab	Lab 10A: Polar and Nonpolar Solutes and Solvents		
Self Assessment	Reflect on the Fundamental Knowledge and Curricular Competencies. Use the rubric and make goals to improve for your next learning guide.		
Interview **AND** Quiz	See you teacher for an interview (Bring all your complete work to the interview) **AND** to have a quiz slip signed for the test center.		

Resources can be found at www.THSSscience.com or the Science Kiosk
*User: **THSS***
*Password: **science***