**KRR 2:**

**Knowledge Base – Facts and Rules**

Every character has a type

Types are: Normal, Fighting, Flying, Dragon, Fire, Grass, Water, Ground, Electric, Ghost.

Some characters: Pikachu, Bulbosaur, Mew, Charmander, Squirtle, Pidgey, Butterfree, Jigglypuff, Oddish, Machop

Potentially: Make up some children for the pokemon (facts) and infer things from there

Facts: What type each character is e.g. [X, is\_type, Y]

Facts: What egg groups each character has e.g. [X, is\_egg\_group, Y] (Pokemon can have more than one egg group)

Facts: Some instances of attacks e.g. [name1, attacks, name2]

Facts: All the children need ages. Above 7 then adult. If adult then parent won’t intervene.

Rules: Which types beat which types

Rules: Different types have different moves, different moves have different “effectiveness”

Rules: Egg groups determine who can mate with who

Rules:

Inference rules: X is one type, Y is another type, X/Y is strong against/weak against according to type. If not strong or weak then normal.

SEMANTICS:

If X is stronger than Y and X is attacking Y, then Y is vulnerable to X.

If X is weaker than Y and X is attacking Y, then Y is resistant to X.

If Y is resistant to X, then X does not beat Y.

If X is neutral against Y, then X does not beat Y.

If X beats Y, then Y does not beat X.

If X is attacking Y, then Y is being attacked by X.

DOMAIN SPECIFIC:

Angry:

If child in fight and child is vulnerable to attacker, then parent is angry at attacker

If parent is angry at Y and parent is stronger than Y, then parent attacks Y.

If parent is angry and parent is not stronger than person attacking child, then parent does not attack person.

Attacking:

If X is attacking Y and Y is a child and Y’s parent is attacking X, then X does not beat Y.

DEFAULT RULES:

If cannot infer that X is stronger than Y and cannot infer that X is weaker than Y, and X is attacking Y, then X is neutral against Y.

If Y is vulnerable to X and can’t infer that Y’s parent is attacking X, then X beats Y.