Writing Plugins in Minecraft with JavaScript
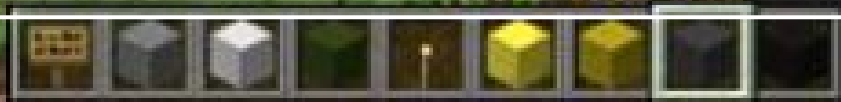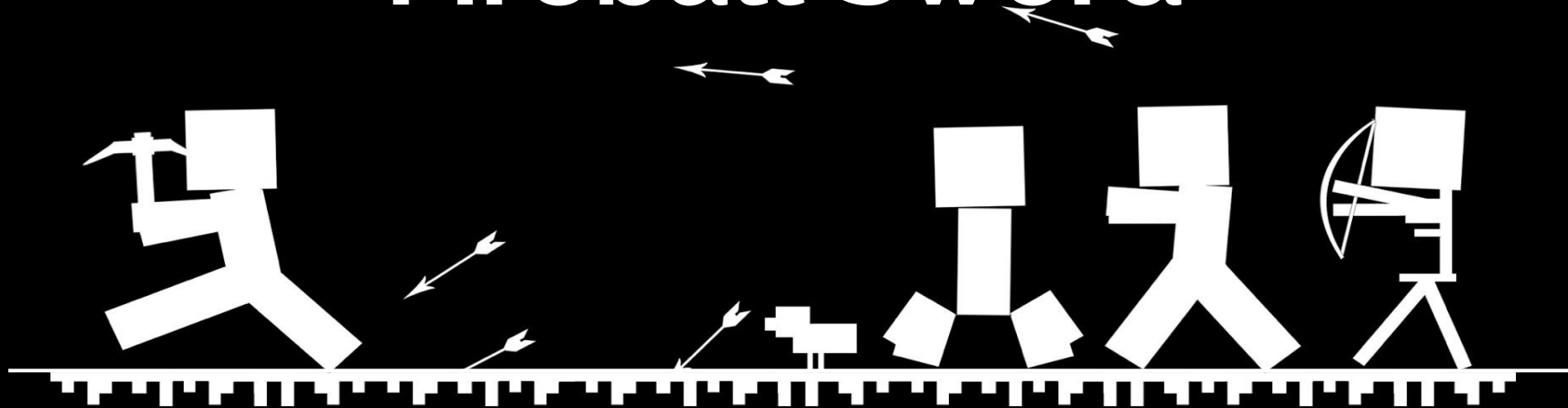
More Advanced Plugins

Goals For Our Plugin

Add a new file called **`plugins/fireballSword.js`**

Todo:

- Create a sword that shoots fireballs when swung
- Fireballs should only destroy mobs (not blocks or yourself)
- Special recipe to craft the sword
- Only shoot fireballs at full health

```
function onArmSwing(event) {

  var player = event.player;

  player.chat('Swing that arm!');

}

events.playerInteract(onArmSwing);
```

Arm Swing Event Hook

```javascript
var items = require('items');
var entities = require('entities');

function shootFireball(player) {

  var entityType = entities.fireball();

  var eyeLevel = player.getEyeLocation();

  var world = player.getWorld();

  var fireball = world.spawnEntity(eyeLevel, entityType);

  fireball.setShooter(player);

}
```

```javascript
function onArmSwing(event)
{
  …
  player.chat(...);
  shootFireball(player);
  …
}
```

Spawning the Fireball

```
var items = require('items');
var entities = require('entities');

function shootFireball(player) {

  var entityType = entities.fireball();

  var eyeLevel = player.getEyeLocation();

  var world = player.getWorld();

  var fireball = world.spawnEntity(eyeLevel, entityType);

  fireball.setShooter(player);

  fireball.setVelocity(eyeLevel.getDirection().multiply(5));

}
```

Fireball Velocity

```
function shootFireball(player) {

  ...

  var fireball = world.spawnEntity(eyeLevel, entityType);

  /* prevent fireball from destroying blocks */

  fireball.setYield(0);

  fling( player, fireball, 3 );

  fireball.setShooter(player);

  ...
```

Stop Destroying Blocks

```javascript
var items = require('items');

function onArmSwing(event) {

  var player = event.player;

  var item = player.getItemInHand();

  If ( isFireballSword( item ) ) {

      shootFireball(player);

  }

}
```

```javascript
function isFireballSword(item) {

  if ( item.getType() ==

        items.diamondSword() ) {

    return true;

  }

  return false;

}

events.playerInteract(onArmSwing);
```

Check for Item in Hand

```
var bkEnchant = org.bukkit.enchantments.Enchantment;

var item = items.diamondSword(1);

var meta = item.getItemMeta();

meta.setDisplayName("Fireball Sword");

item.setItemMeta(meta);

item.addUnsafeEnchantment(bkEnchant.LUCK, 3);

var recipe = new Object();

recipe.result = item;
```

```
recipe.ingredients = {

    B: items.blazeRod(1),

    D: items.diamond(1),

    S: items.stick(1)

  };

recipe.shape = [ 'BDB',

                 'BDB',

                 'BSB' ];

var recipes = require('recipes');

recipes.add( recipe );
```

Special Crafting Recipe

Visualizing the Recipe Shape

Visualizing the Recipe Shape

```
function isFireballSword(item) {

    var luckLevel = item.getEnchantmentLevel(bkEnchant.LUCK)

    if (item.getType() == items.diamondSword() && luckLevel == 3 ) {

        return true;

    }

    return false;

}
```

Checking for the Enchantment

```
function onArmSwing(event) {

  var player = event.player;

  var itemInHand = player.getItemInHand();

  If ( player.getHealth() == 20 && isFireballSword( itemInHand ) ) {

      shootFireball(player);

  }

}
```

Tie to Player Health

That's all!

Now you should have a fully working fireball sword!