Aspects of memory to test:

* lyric memory
  + recall and recognition tests
* title of song – for cuing
* melody memory
* pitch memory
* tempo memory

For all – a production aspect, and an easier test following

1st – could play first line of each song and ask them to produce the rest

* maybe let first round be “free” – sing or hum or whatever you remember
  + so that for lyrics they could sing and instrumental they could hum, they could add sound effects as desired for instrumental parts
* ask them: are you satisfied with that production? Allow them to repeat until satisfied

Then following, in counterbalanced order, test for each of the other aspects of song memory:

Melody Memory

Free recall task:

* using humming or “la” or “da” or whatever syllable is preferred, sing the melody of the song
* for each song, start with just title cue
  + then if participant needs, can get a first line cue
* ask them if they are satisfied with the production

Recognition task:

* hear each melody and say “old” or “new” (Eschrich et al., 2008; memory for songs rated for valence/arousal, found very positive mood associated with best recognition memory)
  + or remember, know, new (Yonelinas)
* can use melodies from songs as old, and melodies from rest of the album as new
* for instrumental songs – instrumental, for lyrics songs –
* for each song – instrumental-only, lyrics-only, and intact
  + then might get more recall songs for ones they heard originally and recognition for lyrics to go with instrumental they heard before etc.
  + so I need to get more instrumental, lyrics-only from Adrian
* for pitch memory: can play some with altered pitch and some with normal pitch
  + targets and foils can all be from original set? Or could mix this with the whole recognition test…
* for tempo memory: can play some with altered tempo and some with normal tempo
  + find out how much to change the tempo & pitch of the altered song clips, & how much to play

Pitch Memory

Free recall task: without hearing the song, produce intro notes to song 3 times, or more until satisfied

Tempo Memory

Free recall task: - same test as above, and measure their tempo for accuracy afterward

Recognition task procedure:

Each trial:

Song title

Job associated with that song

Superman

Sing

Superman

Hum

Songs that didn’t have lyrics originally – can go “lalala” for sing conditions if don’t know words or if it’s a song that never had lyrics

Lyrics:

Free Recall:

* give title of song and ask them to recall all the lyrics they can in writing & singing
* if needed, can also prompt with first line of song, auditorally (or in writing only or both)
  + scoring can be counting number of words correct
  + and scoring line by line whether they got it verbatim or the jist
* which part of the song do they remember best?
  + Can score this from the free recall data
  + As a backup (in case their free recall is bad) can also provide first line cue from different verses and ask them to sing those verses
    - Have them just sing the rest of the verse
* Can give title, first line cue, and background music of whole song
* Give background music for lyrics-only and lyrics+instrumental songs
  + See whether background music helps more in the song they originally learned with background music
* Can also get them to speak the sung words to see if they can remember them when have to speak them instead of sing – without pitch cues, and without temporal cues – speak the words along with this metronome and don’t vary pitch

Speech:

Free Recall:

* give title and ask to recall all words they can in writing
* and spoken recall
* give first line cue when needed
* and for different parts of song task – give first line of different verses and have them finish the verse.

Title memory:

* name that tune – play a short clip and see if they can name the title
* have them press a button as soon as they can identify the song
* then the type in the title
* then we can measure how long it takes to identify the song
* whether this is different for lyrics vs. instrumental vs. intact vs. speech