Karnatak music is organized into metrical cycles known as *talas*, which consist of *matras* (individual beats or pulses) that are grouped into *angas* (larger subdivisions). Musicians and audience members may indicate progress through a *tala* by using *kriya* (hand gestures) including: clapping with palm down (C), or upturned (Cu), turning the palm up in a hand wave, and finger counts touching the fingers on the hand or thigh (pink, ring, middle, index, thumb--*no hand gesture*). In the examples below, the C (clapping with palm down) indicates the beginning of *angas*. Rhythmic interest may be built through doubling and redoubling the speed of vocal recitation while maintaining the constant rate of progress through the *tala* with *kriya* (hand gestures).

### Tala: Rhythmic Component of Karnatak Music

After reading discussion of *Tala* (pages 34-41), have students complete Handout 2.1 to provide definitions of rhythmic terminology used in Karnatak music. Below is an example of how the completed chart may look:

<table>
<thead>
<tr>
<th>Term</th>
<th>Brief explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TALA</td>
<td>Metrical cycle used in Karnatak music</td>
</tr>
<tr>
<td>AKSARAS</td>
<td>Individual beats (counts, pulses)</td>
</tr>
<tr>
<td>ANGAS</td>
<td>Larger combinations of beats</td>
</tr>
<tr>
<td>JATI</td>
<td>Varieties of Karnatak rhythm</td>
</tr>
<tr>
<td>SOLKATTU</td>
<td>Syllable sequences used to count tala</td>
</tr>
<tr>
<td>KRIYA</td>
<td>Hand gestures used to indicate progress through a tala: C=clap with palm down, Cu = clap with palm up, W = wave, Fingers = pinky, rings, middle, etc</td>
</tr>
</tbody>
</table>

### Exercises in Counting Tala

After reading pages 23-28, clap each of the following talas in various tempos using *kriya* and *solkattu*. For classroom use, these exercises are also presented as Overhead 2.1.

**Adi** (8 beat cycle subdivided into 3 angas: 4+2+2)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
C pinky ring middle C W C W
ta ka di mi ta ka jo nu

**Rupaka** (3 beat cycle)

1  2  3
C  W  C
Ta  ki  ta

**Tisra eka** (Another way to count 3 beat cycle)

1  2  3
C  pinky ring
Ta  ki  ta

**Misra Jhampa** (10 beat cycle subdivided 7+1+2)

1  2  3  4  5  6  7  8  9  10
C  pinky ring middle index thumb pinky C  C  W
Ta  ki  ta  ta  ka  di  mi  ta  ta  ka

**Tisra Triputa** (7 beat cycle subdivided 3+2+2)

1  2  3  4  5  6  7
C  pinky ring  C  W  C  W
Ta  ki  ta  ta  ka  di  mi

**Misra Capu** (fast 7 beat cycle subdivided 3+2+2)

1  2  3  4  5  6  7
Cu  Cu  *  C  *  C  *
Ta  ki  ta  ta  ka  di  mi

**Khanda Capu** (fast 5 beat cycle subdivided 2+3)

1  2  3  4  5
C  *  C  C  *
Ta  ka  ta  ka  ta
Melodic materials in Karnatak music are based on ragas. A raga is more than simply a scale or tune: Karnatak musicians consider ragas to be storehouses of melodic history and melodic potential to be drawn upon and realized in performance. There are hundreds of “living” ragas and thousands of potential ragas. Current concert performances make use of some fifty to one hundred ragas. In this manual, western terms such as scale, note, ornamentation, etc. are used only for convenience sake—these terms do not convey the precise meaning of the Karnatak terminology. (1) A raga is constructed of 5 to 7 consistent svaras (melodic steps); each raga has an ascending (arohana) and descending (avarohana) form; These forms may be different—i.e. the arohana and avarohana may contain different svaras; A full raga contains the same 7 svaras both up and down; A raga may contain fewer than the full seven svaras—a raga may also be pentatonic or hexatonic and one or more steps may be skipped in one or both directions. Gamaka (ornamentations) may be attached as an integral part of a svara; A raga may be vakra (crooked)—it may start in one direction and temporarily reverse direction before continuing in the original direction.

Melodic Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Brief explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAGA</td>
<td>Storehouse of melodic history and melodic potential—5 to 7 melodic steps: may be pentatonic, hexatonic, one or more steps may be skipped</td>
</tr>
<tr>
<td>SVARAS</td>
<td>Melodic steps</td>
</tr>
<tr>
<td>AROHANA</td>
<td>Ascending form of raga</td>
</tr>
<tr>
<td>AVAROHANA</td>
<td>Descending form of raga</td>
</tr>
<tr>
<td>VAKRA</td>
<td>“Crooked” raga—may start in one direction and temporarily reverse direction before continuing in original direction</td>
</tr>
<tr>
<td>GAMAKA</td>
<td>An “ornamentation” considered an integral structure of the svara: Kampita (shakes), Jaru (slides), janta (stresses)</td>
</tr>
<tr>
<td>SANCARA</td>
<td>Musical phrases—groups of two or more svaras that are important components of the raga</td>
</tr>
</tbody>
</table>
After reading pages 42-44, the following questions may be used to facilitate class discussion of melodic structures in Karnatak music:

1. What are the “equivalents” in raga to notes in western musical practice?

2. In what ways do ragas differ from scales western musical practice?

3. How were ragas classified prior to four hundred years ago? Discussion could center on “How may a raga represent such non-musical considerations as seasons, time of day, geographical regions, etc.?”

4. Have there been similar classifications of scales and modes in Western musical practice?

5. How are ragas classified in modern practice?

6. Compare classification systems between North and South India.

(6) Exercises in Understanding Raga: Structure and Pitch Syllables

AA

After reading pages 43-47 and listening to several ragas on the companion compact disk, the following exercises may be used to reinforce student understanding of raga and use of pitch syllables in Karnatak music:

Comparison of Pitch Syllables: Western and Karnatak

<table>
<thead>
<tr>
<th>Western:</th>
<th>do</th>
<th>re</th>
<th>mi</th>
<th>fa</th>
<th>sol</th>
<th>la</th>
<th>ti</th>
<th>do</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karnatak:</td>
<td>sa</td>
<td>ri</td>
<td>ga</td>
<td>ma</td>
<td>pa</td>
<td>dha</td>
<td>ni</td>
<td>sa</td>
</tr>
</tbody>
</table>

For classroom convenience, the following examples are also provided as Overhead 2.2

Students sing a western major scale using Karnatak solfege syllables.

To reinforce that the Karnatak solfege syllables remain the same regardless of interval between svaras, students should sing a western natural minor scale.
Ragas may also have differences between arohana and avarohana. To illustrate this, students should sing a western minor scale noting differences between ascending and descending forms.

To further practice using Karnatak solfege syllables, students may select a familiar song and sing using Karnatak syllables. “Mary Had a Little Lamb” is given here as just one possibility.

(7) Singing Ragas
S, C/U

After mastering the above introductory exercises, advanced students may wish to participate in the following activities. Listen to the following examples of ragas from South India.

1. Note where pitches performed on the compact disk do not match the western notation provided in figures 2.7 and 2.8.

2. Sing ragas on CD track 7 and CD track 8 using Karnatak solfege. Try this with and without the CD.
After reading discussion of ornamentation on pages 47-48, advanced students may participate in the following activities:

1. Listen to the examples of gamaka demonstrated in Kiravani raga (Figure 2.9) on CD track 9. How are these ornaments different from or similar to western ornamentations?

2. Perform examples of gamaka from CD track 9. Do this with and without CD.

3. Advanced students may wish to re-listen to CD track 1 (Danava Bhanjana) and CD track 2 (Unnai nambien) and identify use of gamaka. List occurrences by time on CD track.

Each svara in a raga, serves a particular function as explained on pages 51. Have students complete Handout 2.2 defining the functions of each type of svara. Below is an example of how the completed chart may appear:

<table>
<thead>
<tr>
<th>Type of Functional Note</th>
<th>Function of Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jiva svara</td>
<td>Life-giving or soul-giving svara: the functional term used most frequently by South Indian musicians</td>
</tr>
<tr>
<td>Graha svara</td>
<td>Initial note—a svara used to begin melodic ideas</td>
</tr>
<tr>
<td>Nyasa svara</td>
<td>Ending note—a svara upon which phrases can dwell and come to rest</td>
</tr>
<tr>
<td>Dirgha svara</td>
<td>A svara that is prolonged</td>
</tr>
<tr>
<td>Amsa svara</td>
<td>A svara that occurs frequently</td>
</tr>
<tr>
<td>Alpa svara</td>
<td>A svara voiced only briefly or in passing</td>
</tr>
</tbody>
</table>

The following questions serve to guide classroom discussion of the functions of svara:

1. Identify and define the types of functional notes. Why is assigning functional terms to particular svaras subjective?

2. Review note functions in Western musical practices and briefly compare to definitions of functional notes in South Indian music.
Rhythm Activities

Adi (8 beat cycle subdivided into 3 angas: 4+2+2)

1 2 3 4 5 6 7 8
C pinky ring middle C W C W
ta ka di mi ta ka jo nu

Rapaka (3 beat cycle)

1 2 3
C W C
Ta ki ta

Tisra eka (Another way to count 3 beat cycle)

1 2 3
C pinky ring
Ta ki ta

Misra Jhampa (10 beat cycle subdivided 7+1+2)

1 2 3 4 5 6 7 8 9 10
C pinky ring middle index thumb pinky C C W
Ta ki ta ta ka di mi ta ta ka

Tisra Triputa (7 beat cycle subdivided 3+2+2)

1 2 3 4 5 6 7
C pinky ring C W C W
Ta ki ta ta ka di mi

Misra Capu (fast 7 beat cycle subdivided 3+2+2)

1 2 3 4 5 6 7
Cu Cu * C * C *
Ta ki ta ta ka di mi

Khanda Capu (fast 5 beat cycle subdivided 2+3)

1 2 3 4 5
C * C C *
Ta ka ta ka
## WORKSHEET 2.2

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OVERHEAD 2.2/Worksheet 2.3

Students sing a western major scale using Karnatak solfege syllables.

```
Major Scale Raga

\[ \text{sa ri ga ma pa dha ni sa sa ni dha pa ma ga ri sa} \]
```

To reinforce that the Karnatak solfege syllables remain the same regardless of interval between svaras, students should sing a western natural minor scale.

```
Minor Scale Raga

\[ \text{sa ri ga ma pa dha ni sa sa ni dha pa ma ga ri sa} \]
```

Ragas may also have differences between arohana and avarohana. To illustrate this, students should sing a western minor scale noting differences between ascending and descending forms.

```
Melodic Minor Raga

\[ \text{sa ri ga ma pa dha ni sa sa ni dha pa ma ga ri sa} \]
```

To further practice using Karnatak solfege syllables, students may select a familiar song and sing using Karnatak syllables. “Mary Had a Little Lamb” is given here as just one possibility.

```
"Mary Had a Little Lamb"

\[ \text{ga ri sa ri ga ga ga ri ri ri ga pa pa} \]
\[ \text{ga ri sa ri ga ga ga ga ri ri ga ri sa} \]
```